The armament process in the Third World: A case study of India

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THE ARMAMENT PROCESS IN THE THIRD WORLD:

A CASE STUDY OF INDIA

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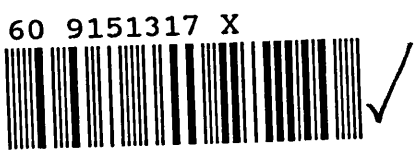

ABSTRACT

This doctoral dissertion is concerned with Indian defence policy and posture beyween 1947 and the present. It seeks to analyse and explain the array of push and pull factors which have shaped and given forward momentum to Indian defence policy. This includes, for example, bureaucratic politics, technological momentum, external threats from regional adversaries and the superpowers, corruption/rent seeking and the structure of the decision making process. Thus, the dissertation attempts to answer the question as to why the Republic of India has developed a specific set of defence postures and what motivates behind the key actors in the process.

The dissertation is also intended as a means to understand better the complex nature of the armament process in the Third World. It is argued that the prevailing approach to this subject is inadequate and, therefore, a new methodology is required to explain better and more comprehensively how the armament process functions in the Third World.

The armament process in the Third World spans two key subject areas of the social sciences; development studies and international relations. The introductory, theoretical section of the thesis deals with how successive development paradigms and, to a lesser extent, those of international relations have interpreted the role and impact of military institutions and military technology on the Third World. It is argued that a new conceptual framework is required due to the inherent inadequacy of the modernising and dependency schools in development studies; a preliminary framework is outlined in Chapter Two.

The thesis concludes that the driving forces of the Indian armament process are several and cannot be explained by one factor alone, such as external threat or technological dependency. However, defence procurement in India is extremely unweildly and is in part responsible for India's current fiscal crisis.

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Nevertheless, all mistakes remain my own.

Note for Readers

1) In the following dissertation a particular style has been used for footnotes. Where footnote appears inside the full stop (eg ...India[1].) the reference relates to data and sources which have been used in that particular sentence. Where a footnote appears outside the full stop (eg ...India.[2]) the reference relates to data in that and other preceding sentences in the paragraph.

2) The research for this PhD has been undertaken over several years, including the period 1983-1989, when the value of the India Rupee has dropped significantly. In 1983 the Rupee-Dollar exchange rate was approxiamtely Rs.10:US$1. By 1989 the value of the Rupee had fallen against the dollar considerably to Rs.15.5:US$1. Therefore, care should be taken when dollar values are given as no base year has been used.

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INTRODUCTION

Over the past ten years it has become commonplace to question and criticise countries which spend large percentages of their Gross National Product (GNP) on defence allocations. Economists, peace researchers, international relations scholars and liberal opinion shapers have all warned at various times of the dangers of rising defence expenditure and the assumed links between armament on the one hand and militarisation/economic decline/armed conflict/anarchic world order on the other.

Many developing countries spend considerable sums of public finance on defence, even though several do not face immediate threats of armed conflict. Nevertheless, there is a well-recognised need for defence preparedness, particularly in Third World regions where there exist numerous sources of tension and imbalance which have all too often spilled over into armed conflict. All countries, whether rich or poor, must guard against invasion or attack. However, it is the manner and degree of Third World arms procurement and the conflict between defence expenditure and development needs and potential which has become an area of considerable concern in recent years.

At the same time, however, the frameworks for analysis which have emerged to understand the armament process in the Third World have not provided a sufficiently useful means of approaching the problem. Still less has there been any attempt to construct a framework which is capable of coming to terms with the problems on the one hand and the potential solutions on the other. Or, put

another way, the intellectual framework for the development of implementing policies which could break the links between armament and underdevelopment have been totally ignored.

To date, most of the concern has focused upon the necessary but limited exercise of mapping and measuring the extent of overall defence and military activities in the Third World. As a result, the ability to understand why individual countries choose to acquire the types and quantity of weapons systems they do is very limited; the driving forces behind the armament process within the Third World are barely understood.

In the following essay, two inter-related tasks will be attempted. First, the state-of-the-art concerning the academic approach to the armament process in the Third World will be reviewed, discussed, criticised and taken one step further to facilitate the development of a more realistic conceptual framework. In this instance, a traditional literature review is of limited usefulness, the subject area is too diverse and the academic rigour too weak. Instead, the opening chapters will concentrate upon a review of the development paradigms which have shaped the debate concerning the importance of defence and military institutions in the political and economic development of the Third World. In addition, reference will be made to the importance of international relations theory, for two reasons. First, the evolution of development theory parallels that of international relations. Second, the two disciplines are more inter-linked in terms of the subject areas they seek to understand than is usually understood. The key differences are to be found in the exogenous and endogenous approaches to problems areas which

are the concern of both. However, whereas development studies is in sharp decline, international relations appears more robust and useful on account of recent theoretical developments. Can, therefore, the development and direction of international relations theory offer some guidelines and inspiration for the faltering and increasingly inadequate direction of development studies, and, at the same time, envigorate research on Third World armament and underdevelopment? Is this the way forward to constructing a more relevant and comprehensive conceptual framework through which the armament process in the Third World might be better understood?

Another key weakness in the research tradition is the lack of empirical detail on a country-by-country basis, which stems from the failure to involve researchers from the Third World in the debate and the subtle ethnocentric bias of the prevailing paradigms. As a result any attempt to understand the dynamics of the armament process in the Third World is severely hampered by a lack of information, which can only be acquired by regional and national case studies.

Over the past decade the Republic of India has increased considerably its defence and military capability. After the re-election of Indira Gandhi in 1980, a far reaching defence modernisation programme was introduced which through the decade took defence expenditure per annum from Rs.3,877.77 crore in 1980-81, to Rs.7,688 crore in 1985, and to Rs.13,000 crore in 1988-89[1]. With the exception of the OPEC countries of the Middle East, few Third World countries have sanctioned such large increases in

1 Gupta and Thakurta [1989], p.43.

defence expenditure in the absence of overt conflict, even during the 1970s when the demand for arms from the Third World was particularly high.

Since 1980, all three services have received substantial increases in their respective procurement budgets. As a result, India has been particularly active on the international arms market, but thus far only as an importer[2]. Over the past decade, large scale imports have come from the country's traditional supplier since the early-1970s, the Soviet Union. In addition, deals have been made with several Western arms exporters, including Britain, France, Sweden and, lately, the United States.

India's massive rearmament programme has been justified on the basis of increased security threats throughout South Asia and the Indian Ocean since 1980; regional tensions have risen in South Asia over the past decade, and this too against a backdrop of increased global tension, until recently. On the one hand, relations between India and Pakistan have rarely been cordial since 1947 and became particularly fractious during the early-1980s. Pakistan fears the increasing conventional military strength of India and, also, the latter's intensifying hegemony in the region; since 1971 India has maintained a powerful 3:1 conventional superiority against Pakistan.

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2 India does export small quantities of defence equipment. At present the Government is poised to attempt to increase defence exports. However, their efforts are unlikely to succeed because of the quality of Indian defence exports, the low level of demand worldwide and the restrictive export policy which India must surely operate as a leading member of the non-aligned movement.

Despite the fact that India was instrumental in the partition of Pakistan in 1971, there is considerable concern in New Delhi over the military threat from Pakistan. The creation of Bangladesh in 1971, it could be argued, actually increased Pakistan's security because Islamabad no longer has a povery stricken and politically fissile Eastern wing to both contend with and protect. After the 1971 war, Islamabad was able to consolidate and concentrate on the threat from India on one, not two flanks. Although relations between Pakistan and the United States have rarely been smooth since the 1950s, since 1980 Pakistan has received considerable quantities of military and economic aid from the United States. This was one element of the former Reagan Administration's policy of deterring the Soviet Union and, at the same time, persuading the Kremlin that continued involvement in Afghanistan was too expensive, both politically and economically. Pakistan's evident progress in the covert development of nuclear weapons and the failure of the US Congress to make military and economic aid conditional upon an inspection of nuclear facilities has caused further concern in New Delhi, however much it was India not Pakistan which started the nuclear arms race in South Asia. Finally, India is concerned about links between Islamabad and Sikh extremists. The latter are intent upon forcing the Indian Government to create a separate Sikh state, Khalistan, in the area which is now the Punjab (India). In addition, New Delhi is worried about the threat from China to the East and a less tangible threat from the Indian Ocean.

It can be argued, as Indian decision makers have done throughout the 1980s, that Pakistan, China, the superpower presence in the Indian Ocean and, further afield, some of the rising middle powers

in the Middle East, together provide India with a significant set of security problems which must be offset by a level of defence preparedness. However, whether or not the scale of defence activity requested by Indian Governments since the late-1970s is really justified in its own right or, indeed, meets India's defence requirements, is open to question.

In addition to the considerable rises in defence expenditure, which adds little to the country's development efforts overall, the defence modernisation programme has seriously depleted country's foreign reserves. This has compounded the foreign exchange problems which already exist due to the recent liberalisation of the economy. During the late-1980s India's foreign exchange resources have dipped to a precariously low level; in February 1989 India recorded the largest decline in foreign exchange reserves this decade, when levels dropped by Rs.17.2 billion ($1.02 billion)[3].

Several important questions arise from the scale of India's recent defence build-up. First, in the relatively secret area of defence, how much is actually known about the programme; what exactly has Indian bought on the open market, secured from the Soviet Union or prduced indigenously? Second, is there a reasonable fit between defence policy and posture on the one hand, and the articulated security threats on the other - do the purchases match the threats or does a lack of fit suggest that the defence modernisation programme fulfils other ambitions? Third, why has India engaged in such a diversified arms procurement programme? Fourth, how many of the decisions, justified in the

3 Housego [27 February 1989].

name of the new security threats, were taken after 1980 and how many came before the onset of the new Cold War, when East-West relations soured so badly and when Pakistan began to rearm on the basis of military aid from the United States? If some were taken before 1980, can the momentum behind the defence build-up be traced back to something else, such as bureaucratic in-fighting, corruption, well-construed foresight or pressure from India's major ally, the Soviet Union, to consolidate regional hegemony and counter-balance the relationship between Pakistan, China and the US? Taken together, there is a need to know exactly what has taken place in recent years, for what reasons and to what effect.

The importance of understanding what has happened within India cannot be underestimated. It has frequently been argued that high defence expenditures and arms imports adversely affect developing economies. Resources channeled into the defence sector may provide a public good in the form of security but otherwise amount to opportunity costs, particularly in relation to the state's obligations to educate and care for members of the community, for example.

In the years between independence and the 1962 Sino-Indian war, India spent on average less than 2% of its GNP on defence. This figure rose to over 4% in the mid-1980s, well in excess of the 3.0% level which is generally considered within the country to be the uppermost limit during periods when the country is not at war. Calibrating the effect on India's economy is both extremely difficult and outside the remit of this study. Data are very difficult to obtain, particularly with regard to foreign exchange disbursements for defence purposes. Furthermore, there is no

established methodology for approaching this question, although several researchers have attempted to assess the impact of defence expenditure upon development in the Indian context[4].

Nevertheless, high defence costs will affect developing economies in different ways and there can be no set level above which defence will impact negatively upon development. The scale and rate of defence activity in India since 1980 suggests that if the development process is not being directly affected now, then it will be in the future if defence expenditure stays at or rises above 4% of GNP per annum and the present Government's fiscal crsis continues. Moreover, recent reports from India suggest that the defence build-up has developed serious problems in recent months. Despite detailed planning and lavish expenditure, India may be no less well armed or secure than it was in 1980.

Increased activity in both the conventional and the nuclear defence fields has caused increased regional problems in South Asia in the past and will continue to do so in the future. In recent years relations between India and its neighbours, Pakistan and China, have not been good. Attempts on the part of New Delhi to normalise relations with regional adversaries have been few and far between. Obversely, the tremendous defence build-up has clearly worried decision makers in Pakistan, if for no other reason than it is their country which appears to be the main source of perceived concern in New Delhi. Recently, New Delhi has appeared willing enough to rattle its new found sabres in the direction of Pakistan and military operations in 1988, codenamed Operation Bluestar, brought the two countries very close to war.

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4 Deger [1986]; Terhal [1982].

Key Indian decision makers and members of the armed forces seem keen on occaisions to threaten Pakistan and seem also to have the political will to go to war.

Understanding how and why India has arrived at the defence posture it now possesses requires a step by step analysis of how the posture has evolved and what appear to be the motivating forces. First, therefore, it is necessary to consider from which direction and to what extent India considers itself to be under threat. Second, it is important to go back to 1947 to consider how India's defence policy evolved and to understand the dynamics involved.

Third, it is appropriate to trace through the evolution of defence policy up until the present. Thus, in addition to the early period, the history of defence policy since the 1962 Sino-Indian war up until the late-1980s is a required section of the picture. Fourth, given the stress placed by successive Indian Governments on import-substituting industrialisation policies, it is also appropriate to examine the country's ability to produce its own defence equipment. Finally, the decision making structure will be examined in the light of the data presented on the evolution of defence policy, arms imports and indigenous defence production.

From this level of detail and analysis it will be possible to uncover the dynamics which underpin Indian defence policy. This will provide the means to understand why the country's leaders have been profligate in the defence sector and what lies behind the tremendous defence buid-up of the 1980s. This is rapidly becoming a question of considerable concern both within and outside India. The following essay attempts to offer the most

thorough explanation possible as to what this process has involved and how it can be understood. Not only will this be enlightening in the case of India but it will also assist further research and analysis of the defence sectors of other Third World countries.

CHAPTER ONE

ARMAMENT, DISARMAMENT AND DEVELOPMENT IN THE THIRD WORLD

1.1 Modernising the Military and the Military as Modernisers

Over the past three decades a considerable number of academics from the social sciences have turned their attention to the various problems associated with the armament process in the Third World, particularly the North-South arms trade and military expenditures in developing countries. During the 1950s and 1960s, the initial thrust came from within the United States. Very little interest could be seen in either Western Europe or the Third World during this period. This geographical concentration of effort was important. For the United States there were geo-political and economic problems to be weighed with care when considering the military aspects of the North-South, East-West interface. At the North-South and the South-South level it was an extraordinary period as the political formations of the first half of the twentieth century began to disappear to be replaced by a completely new range of global actors ranging from the United Nations to the urban guerilla. Amongst the many considerations for US foreign policy makers, the role of the military in new nations was considered to be crucial. On the logical premise that governments might come and go and that the rate and direction of political change would be controlled or condoned by the military, successive American governments used wherever possible military institutions in the Third World as a bridgehead to acquiring and consolidating influence.

Within the Third World, the confused and often violent passage to independence in the wake of a rapid collapse of formal empire gave rise to new demands from governments. In the inevitable, recurring attempts to affirm progress in nation building and social, political and economic development, a primary focus centred upon the development of national institutions such as bureaucracy, universities, development agencies and the military. The military in particular was a powerful symbol of nationhood and independence. In addition, the importance of the military turned on its control of organised force in relation to the chaotic, uncertain and unpredictable characteristics of the era and the military's potential for either assuming responsibility for, or, influencing significantly the process of nation-building. Thus, military institutions had a special place in the development process. The international environment in general and both regional and intranational tensions in particular placed them in an important if not definitive position; the complications and contradictions inherent in the very process of nation building set the military apart from other institutions. In addition, and sometimes as a result, the political systems in the developing countries were often weak and unstable. The military were both guardians and symbols of national sovereignty and capable as well of making or unmaking governments or, at the very least, influencing significantly the affairs of state.

To this end, two aspects of US foreign policy became extremely important. The first was arms transfers (as distinct from sales), the second was military aid[1]. Given the level of armament stockpiles

1 The term arms transfers refers to orthodox, commercial arms sales and in addition arms sales which are agreed under very

which existed between the end of the Second World War and the beginning of the Korean War, arms transfers and military aid represented affordable carrots to sway the emerging Third World in the unequivocal choice established by the Truman Doctrine, that in 'the present moment of world history nearly every nation must choose between alternative ways of life'. The policy framework was the doctrine of containment. American policy makers asserted that the main concern of the Soviet Union was to fill 'every nook and cranny available to it in the basin of world power'.[2] On this assumption the United States sought to contain the Soviet Union and insulate the rest of the world from the effects of direct and indirect Soviet influence[3].

In practice this required a double-edged policy for what American policy makers termed the 'free world'. Those states which shared a border with the Soviet Union, such as Pakistan, Turkey and Iraq, were offered large quantities of military aid and assistance to set in motion conventional military build-ups in the Forward Defence Areas (FDAs). In turn these states were linked by interlocking treaties (NATO, CENTO, SEATO) to form a ring around the outer edge of the Soviet bloc (including China)[4]. The rest of the world became the

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favourable terms which include credits, low interest rates, long periods for repayment sometimes with grace periods and rescheduling options.

2 'X' (George Kennan) [1947].

3 These aspects of US foreign policy have been most comprehensively reviewed and researched by the US 'revisionist' school of historians, particularly William Appleman Williams, D.F. Fleming, Stephen Ambrose and Richard Barnett. For a useful bibliography see Gardner [1973], pp.518-9.

4 NATO: North Atlantic Treaty Organisation
CENTO: Central Treaty Organisation
SEATO: South East Asia Collective Defence Treaty Organisation.

Free World Orientation Area in which the United States attempted to manoeuvre, bribe or cajole individual states in the anti-Soviet bloc[5].

Complete with ample stocks of obsolete military hardware, and a guarantee of equally large stocks of more advanced equipment to underpin the emerging defence policy and posture based primarily upon the forward defence of Western Europe, the United States transferred large quantities of military aid and hardware to prospective and proclaimed allies in the Third World (see Table 1.1).

The response of the academic/research community in the United States was interesting. Academics and 'think-tank' researchers filled a niche as commentators, evaluators and distanced advisers to the wishes of US policy makers impatient to understand and assess the evolution of the Third World against a backdrop of Cold War politics. The primary concern in international relations, the most obvious locale for research on Third World related issues, was, however, the fluid and unpredictable relationship between the superpowers. This was, after all, the period when strategic studies became a discipline of particular importance and when realism was dominant within the field. Apart from the ethnocentric bias of the subject, few commentators were prepared to extend their level of analysis beyond the nation state[6]. At the start of the 1950s, the emerging Third World was considered primarily in relation to the balance between East and West. The result was considerable ignorance and confusion

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5 SIPRI [1971], pp.157-169.

6 For a critique of ethnocentrism see Booth [1979].

Table 1.1: US Military Assistance to Third World Countries[a], by region

	Region							
	Far East	Indian Sub-Continent	Middle East	Greece and Turkey	North Africa	Sub-Saharan Africa	Latin America	Third World Total
	US $mn							
US fiscal years								
1949-52	160.7	-	16.6	559.4	-	-	0.2	736.9
1953-57	2,403.7	160.4	163.6	1,350.2	-	14.6	151.8	4,244.3
1958	627.8	92.9	151.4	392.8	1.1	8.8	47.9	1,322.7
1959	606.6	102.7	113.5	290.8	1.6	5.3	54.0	1,174.6
1960	501.6	79.1	95.2	217.2	2.7	7.3	53.7	956.8
1961	495.4	56.7	60.6	128.7	5.1	6.4	11.4	864.3
1962	523.3	29.7	44.1	191.3	5.0	18.6	132.8	944.8
1963	651.8	108.4	91.3	258.0	12.2	14.0	82.3	1,218.0
1964	563.7	64.2	44.8	184.8	11.6	16.7	75.7	961.5
1965	648.9	64.0	77.9	222.4	5.8	11.8	67.3	1,098.1
1966	535.6	7.6	108.3	179.2	5.1	16.8	82.0	934.6
1967	673.0	6.0	164.9	162.5	13.8	18.0	76.5	1,114.7
1968	1,026.9	5.6	116.9	175.9	10.8	22.7	99.2	1,458.0
1969[b]	1,064.2	1.6	83.4	165.0	6.9	14.4	37.9	1,373.4
1949-69	10,483.3	778.9	1,332.5	4,478.2	81.7	175.4	1,072.7	18,402.7

[a]Includes Military Assistance Program, Greek-Turkish Aid, China Naval Aid, PL-454 Philippines aid, Vessel Loans, aid to Viet-Nan, 1967-69, and Thailand and Laos, 1968-69, in Department of Defense Budget. Excludes deliveries of excess stocks.
[b]Excludes credit assistance.
[c]Excludes undistributed assistance to Indo-China.

Source: SIPRI [1971, Table 3.5, p.146-147.

in both the State Department and successive administrations over how to respond to political events within the Third World.

Following the election of Dwight Eisenhower in the US, John Foster Dulles became the new Secretary of State and he arrived in government with a firm view that the Truman-Acheson policy of 'containment' was too weak. Apart from the need to 'liberate' Eastern Europe by peaceful means, it was also necessary to consider the emerging Third World, the more so as many US policy makers recalled the prophesies of both Lenin and Stalin that 'the shortest route to Paris is via Peking'. If, therefore, the Third World was to be 'saved from communism', individual countries had to be integrated completely into the political and economic system of the West. However, in the Third World, the strength and basis of ethnicity, nationalism and opportunism as key determinants of foreign and domestic policy were often misunderstood and led over time to involvements in Central America, the Middle East and, eventually, to Vietnam. It seems that few US policy makers recognised fully the scale of change occurring; as Geoffrey Barroclough has pointed out, the emergence of the Third World was one of the most politically notable events in world history[7].

Those who did consider questions relating to the defence sector and military institutions in the developing world did so at two levels and both drew heavily upon sociological methods to explain, or justify in part, the ramifications of American military aid programmes. In both cases the academic location for this research was not international relations but other areas of the social

7 Barroclough [1967], p.153.

sciences, such as political science, sociology and development studies. In August 1959, the RAND Corporation (a US Air Force think-tank) sponsored a conference designed to provide a forum for the exchange of ideas and information on militarism. The papers written for the conference focused upon military-political developments in underdeveloped countries and the main contributors were primarily political scientists and historians with an interest in military affairs and a knowledge of a particular area of the world. The resultant book, edited by J.J. Johnson, became something of a landmark in thinking on the role of the military in the Third World[8]. The aim of the conference and the subsequent research inputs was to examine the 'software' element of the equation linking developing countries to the Cold War environment.

The results of this research programme suggested that there existed a general consensus on a 'tutelage' role for military élites in the Third World. These élites often behaved in a fashion which placed them head and shoulders above their civilian counterparts. Through their acquaintance with modern military technology they possessed modernising skills. The structure of the armed forces downplayed parochialism and encouraged a cosmopolitan outlook. Competition between the military élites of different countries placed a premium upon various aspects of development and nation building. An advanced level of awareness, technical and administrative skills, the acceptance of ordered, structured development, benign nationalism, anti-communism and the monopoly of force were considered the qualities which enabled military élites to play a key role in the modernisation process. Furthermore, the combination of strong

8 Johnson [1962].

institutions and modernising perspectives would also encourage foreign aid and investment which were considered fundamental to the development process involving a transformation from rural poverty to urban wealth[9]. Consequently, for American policy makers, the military élites offered a potentially stable and productive point of interaction,

> "... the army is often the most developed public organisation in an underdeveloped country, and as a consequence its leaders feel more self-confident and are more able to deal frankly and cordially with representatives of industrialised countries. Military leaders are often far less suspicious of the West than civilian leaders because they themselves are more emotionally secure. This sense of security makes it possible for army leaders to look more realistically at their countries. All these considerations make it easier for the military leaders to accept the fact that their countries are weak and the West is strong without becoming emotionally disturbed or hostile toward the West. Since these leaders seem to have less need to avoid realities, they are in fact easier people with whom to deal and to carry on straightforward relations."[10]

Much of the academic work undertaken over this period was conceptual and schematic, as befits the birth of a new area of research. However, the message from the RAND Corporation and their associates was extremely clear; in the search for stability in the Third World a strong, pro-Western military élite, close to the political process could deliver according to the criteria established by US foreign policy makers.

If opinion shapers close to the policy making apparatus provided those responsible for apportioning and sanctioning military aid with an intellectual justification for a political strategy, the same cannot be said for the second line of approach taken by university-

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9 Johnson [1962].

10 Pye [1962], pp.87-88.

based political sociologists also working in the same area. In contrast to the oft-quoted idea that the 'modernising school' represented a concerted approach, there were equivocations[11]. Morris Janowitz, who subsequently became one of America's leading military sociologists, developed a less sanguine view of the military's potential for providing the cutting edge of development and modernisation. Janowitz recognised that the military could perform an adequate role as guardian to weak political institutions due to their sense of public service[12]. This view was echoed by Manfred Halpern who argued that the military in developing countries, particularly the Middle East, were a new middle class, individualistic not family orientated, meritocratic and positive towards technology and the ways of the modern world[13]. However, Janowitz stopped short of a blanket endorsement of the prevailing trend in American foreign policy but did so from a position which, in essence, upheld the ideology which condoned the supply of military aid and assistance. His primary concern was that the policy might backfire and produce the wrong results with catastrophic results for both the political development of the new nations and for the foreign policy of the United States,

> "As yet, no new nation has fallen to an outright Communist mass political movement which would neutralise the political power of the military ... More likely, the disruptive consequences of internal factionalism within the military oligarchy will first destroy its ability to rule and pave the way for the rise of militant authoritarian movements, left-wing and right-wing. The process of military intervention is not irreversible, but if political change must wait for the breakdown of a

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11 For an example of those who saw a concerted if not conspiratorial approach see, Ball [1981], p.2, and, Kaldor [1986], pp.73-75.

12 Janowitz [1964], p.100-106.

13 Halpern [1963].

> military oligarchy, its outcome will not be conducive to an orderly and humane process of modernisation."[14]

It was, therefore, these two groups which defined indirectly the parameters of the initial debate relating to the transfer of military technology to the Third World and its effect upon the (political) development process. To a large extent they were uninterested in the transfer of armaments and military technology from North to South. The arms trade was seen as a means to an end and not as a serious problem in itself. With the benefit of hindsight it is not difficult to see why this happened. Most of the commentators worked from within the uncontested development paradigm of the period based upon the concept of modernisation. Essentially, the modernisation paradigm was rooted in a social scientific and historic ethnocentricity. Development was not seen to be the contradictory and awkward process as we now know it. Instead, development theory was alluringly simplistic and based upon a basic faith that pulling the right levers would activate development and put an end to 'backwardness'. Economically, this involved passing through various stages of growth. Politically, the emphasis lay in the attainment of political order rather than in an understanding of political change. Sociologically, the problem turned on the transition from 'tradition' to 'modernity'. As far as defence was concerned, it was a necessary item of government expenditure with both positive and negative ramifications for the development process.

Thus, the attention of the modernisers focused primarily upon institutions in the Third World and their potential ability to either retard or advance the process of economic and political growth. As

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14 Janowitz [1964], p.106.

such they were the intellectually influential exponents of the dominant development paradigm. Inherent in this view was that underdevelopment in the Third World was fundamentally due to an absence rather than a misallocation of resources and that suitable conditions could mobilise resources, induce growth and aid development. As political scientists/sociologists, these commentators were primarily interested in the role, purpose and effectiveness of the disaggregated components of the state, namely institutions. Here, Samuel Huntingdon's observation that 'the most important political distinction among countries concerns not their form of government, but their degree of government' was of critical importance[15]. Due to the emergence of new social classes in the twentieth century, the bourgeoisie and the proletariat, and a series of crises amongst colonial powers and the dominant social classes, the new nations, (particularly those in Latin America), faced a series of crises of identity and political order. The building of institutions and the sharing of power arrested the movement of political élites towards hyper-autonomy and laid the foundations for modernisation, which in turn held the potential for stabilising the tendency towards economic and political crisis[16].

However, the modernisers were working in a difficult academic area and, initially, they lacked the empirical evidence to prove or disprove their central thesis. If the military in Latin America had been disposed to intervene to assist the process of stabilisation and thereby allow the modernisation process to continue, it was also capable of behaving in a reactionary and authoritarian fashion.

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15 Huntington [1968], p.1.

16 Roxborough [1979], p.112.

Thus, whether or not the military acted as the instigators of breakthrough or veto coups was extremely important[17]. Moreover, the military institutions in other parts of the Third World were, to a degree, an unknown quantity and their development was unpredictable[18]. And it was in precisely these areas that American policy makers required a greater level of certainty given the geo-political proximity of the former to the Soviet Union and the number of areas contested by Cold Warriors.

By the mid-1960s, the modernising school had been overshadowed by a series of more 'policy-related' programmes. During the early 1960s, the increasing involvement of the United States in Vietnam and the concomitant concern to both understand and counter the effectiveness of insurgency led analysts to consider the political nature of counter-insurgency. In mid-1964 the Office of the Chief of Research and Development of the Department of the US Army sanctioned a multi-million dollar study of insurgent behaviour in underdeveloped countries which subsequently became known as Camelot. The remit of this programme was to determine the feasibility of developing a general social systems model which would make it possible to predict and influence politically significant aspects of social change in the Third World[19]. Project Camelot was a failure. Thereafter, however, in the face of Vietnam the requirements of the policy makers were too specific to involve the 'modernisers' in mainstream, policy related research.

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17 Huntington [1968]. Versions of this theory are also held by José Nun and J.J. Johnson.

18 Ball [1982], p.42.

19 Klare [1972], pp.76-77.

It was, therefore, an analytically untidy picture which emerged out of the US during the two decades following the Second World War. Between the fields of international relations and development studies there was a strict division of labour between the endogenous analysis of militarism and the exogenous concerns of the Cold War with little apparent communication between the two. Moreover, the methodologies employed were overwhelmingly static - the dynamics of change and the contradictions thrown up by the very process of development were barely considered either in their national context or in relation to their international or regional impact.

1.2 Attacks Upon the Modernisers and Modernisation - Ideology, Technology and a New Paradigm

It has already been noted that the modernising school grew out of a particular paradigm which understood development in a specific and limited fashion. In this instance, the research tradition stressed the role of institutions in the process of nation-building. As such, they analysed the military with close regard to their potential for moving developing countries from a traditional state of 'backwardness' to a position of economic dynamism and reduced political unpredictability. Thus, on the basis of a close analysis of the motivating forces of the West European transition from traditional/feudal to modern/capitalist principles of organisation, it was uniformly accepted that developing countries could do the same.

However, two major problems emerged with this paradigm and contributed to its demise. The first concerned the growing divergence between the prognoses of early development theorists and the actual level of development progress which could be discerned over the course of the two decades following the end of the Second World War. Quite apart from the debate over whether or not the military could perform the role of a key actor in the development process, it was becoming generally clear that whilst developing countries may have been enriching themselves in aggregate terms, the gap between rich and poor was becoming wider. The poorest people were remaining well below the poverty line and the international system as a whole was showing itself to be singularly unable to encourage even a modestly egalitarian allocation of both previously existing or newly created resources.

The second problem encountered by early development theory was analytic. Throughout the early period of conceptualisation over how development could and would occur, the solutions and the problems were considered to be endogenous. Under no circumstances were external conditions seen to be the cause of underdevelopment. In time, theories of development based upon modernisation became much less credible on the basis that the concept of replicating the industrialisation of Europe in the Third World through stages of growth and the nurturing of essential institutions was untenable in so far as it ignored the influence of the world system on individual countries.

Nevertheless, the critiques which emerged from outside the prevailing paradigm did not influence the policies of the developed countries in

relation to trade, aid, technology transfer or foreign policy. However, they were more successful with non-state actors such as United Nations' bodies where, indeed, some of the new architects were either themselves employed or at the very least enjoyed a sympathetic ear.

The founding father of what became known as the dependency school was Paul Prebisch, under whose direction the United Nations Economic Commission for Latin America (ECLA) attempted to show that the dynamics of the international system were in many ways responsible for the developmental failures of the Third World. In the specific case of Latin America, ECLA argued that it was only during periods of war and world economic recession that Latin America's externally orientated development was interrupted and this led to pronounced bouts of economic development until such a time that the links between centre and periphery were reestablished. The mainstream approach of ECLA economists was eventually criticised on account of their simplified growth theories and an undue faith in the role of foreign trade in the development process. From out of this process grew the mainstream dependency school, established initially in Latin America but spreading quickly to other regions of the Third World and certain academic development centres in Europe.

Although the key tenets of dependency theory emerged rapidly during the late-1960s, the internal debates were complex and highly charged. Nevertheless, by the mid-1970s, the range of dependency theories could be collectively identified as a school and a whole new approach to the problem of underdevelopment became established.[20] Duly, from

20 It is impossible here to outline the contours of the internal debates amongst dependency theorists or the critiques of neo-

within the dependency school an intellectual niche was created which stressed the deleterious effects of armament upon the overall development process in sharp contrast to the orthodox view which condoned arms transfers as a means to security, stability and, even, development. Throughout the late-1960s and 1970s the bulk of effort dedicated to understanding the cause and effect of armament in the Third World stemmed from mainstream dependency theory.

In addition, whilst a number of dependency theorists concentrated upon their analysis of the relationship between armament and underdevelopment, a parallel debate evolved in the West over the political economy of military expenditure. A connection between these two areas was established in Paul Baran's book, The Political Economy of Growth, a precursor to his work with Paul Sweezy, and a seminal influence upon the emergence of neo-Marxism which, in turn, provided the intellectual bedrock for dependency theory. In Monopoly Capital, Baran and Sweezy argued that military expenditure in Western countries played a fundamental role in stabilising capitalism through the absorption of surpluses. In addition, the creation of a more powerful war machine offered positive benefits in relation to foreign policy[21].

A connecting link between emerging neo-Marxist theory, Third World issues and what became known as the 'arms economy' was provided by Kidron. Hitherto, theories of imperialism had assumed a net outflow of capital from the centre to the periphery. However, empirical

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classical economists. This has been done before; see the excellent analysis by Blomström and Hettne [1984].

21 Baran and Sweezy [1968], pp.178-214.

studies began to show this not to be the case and the data revealed a net flow of capital from the periphery to the centre rather than vice versa[22]. Thus, imperialism appeared not to be the mechanism for coping with the problem of overaccumulation. According to Kidron, the problem of overaccumulation had been solved, not by exporting capital to the periphery, but instead by the absorption in the form of waste, specifically the development of a permanent arms economy[23]. Kaldor took the argument a stage further with her observation that arms exports represent a particular stage of imperialism. In the early phase of imperialism, when Third World economies were penetrated primarily through trade, a limited transfer of arms was necessary for repression to ensure the imperialist feedback. Exploitation was delegated to loacl rulers. With the beginnings of economic decline, it became necessary to establish a monopoly political position in order to maintain or penetrate a dependent economy. The political function of arms exports and direct military intervention became more important. However, the costs incurred reduce the funds available for accumulation, offset the economic advantages of spheres of influence and exacerbate the process of decline. This leads to a dependence upon arms exports which soon becomes incompatible with the political function of arms transfers and sales as the luxury of selectivity is lost.[24]

Initially, there was a concerted attempt to attack and discredit the modernising paradigm. Janowitz, et al, were briefly criticised and dismissed as ideologues seeking to justify and underpin the

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22 Müller [1973].

23 Kidron [1968].

24 Kaldor [1977].

theoretical and intellectual elements of American foreign policy defined on the basis of the open door,

> "Their interest was spurred in part because militaries were coming to power in many third world countries and in part because of the interest of Western governments in the question. Among the major powers, the United States government was the most interested in promoting the growth of a body of evidence that would justify the expansion of military aid to the Third World."[25]

In general, armament-dependency theorists mounted their attacks at a personal and disaggregated level. Of particular note was the furious diatribe against the American economist, Emile Benoit, whose tentative study on the potential positive correlation between defence expenditure and economic growth drew a disproportionately strong critique from the left[26].

On another tack, neo-Marxists responded incisively to the discernible trends in both military expenditures in, and arms transfers to, the Third World. In 1965 military expenditure in the Third World amounted to US$41 billion. By 1973 it had doubled to US$82 billion and by 1976 it had risen again to US$107 billion. Arms imports reflected a similar trend. For the same years arms imports went from US$2.1 billion (1965), to US$9.6 billion (1973) to US$11.1 billion (1976). In part this was due to the marked decline in military aid and assistance from the United States, a result of the Nixon Doctrine and the declining economic strength of the United States. However, it was also due to the onset of defence modernisation programmes in many Third World countries throughout the late-1970s and beyond; arms

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25 Ball [1981], p.2.

26 The debate has been a long and cutting one. For the original thesis see Benoit [1973]. For a definitive critique of the Benoit study see, Ball [1983].

imports rose very steeply around the turn of the decade to reach US$30.6 billion by 1982 (See Figures 1.1 and 1.2).[27]

In conjunction with a growing acceptance that military institutions in the Third World were showing more signs of incompetence, corruption and instability than had been anticipated, the level of analysis centred upon the adverse development effects of military expenditure and armament. Luckham identified four basic patterns or forms of development underpined by military spending:

1) Military spending aids a state project based upon forced and rapid development. If rapid growth is to be achieved the state must avoid directing government spending towards welfare in favour of production and/or subsidies for capital. Government must also hold down wages and rural incomes thus requiring the military to suppress labour unions, strikes and peasant protest. Rewarding the military requires high military expenditure which in turn requires additional forced saving, inflationary pressure and leads to public unrest. Military force is effective in resolving through violence and inequality the crises to which peripheral economies are prone.

2) The military is capable of strengthening the state structure and its control over the process of economic growth. Military spending permits a larger concentration of military force in the hands of the state than would otherwise be possible. If the state is powerful and centralised the military can extract infinite resources for its own expansion.

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27 All statistics taken from, Sivard [1986], Table I, p.32.

Figure 1.1

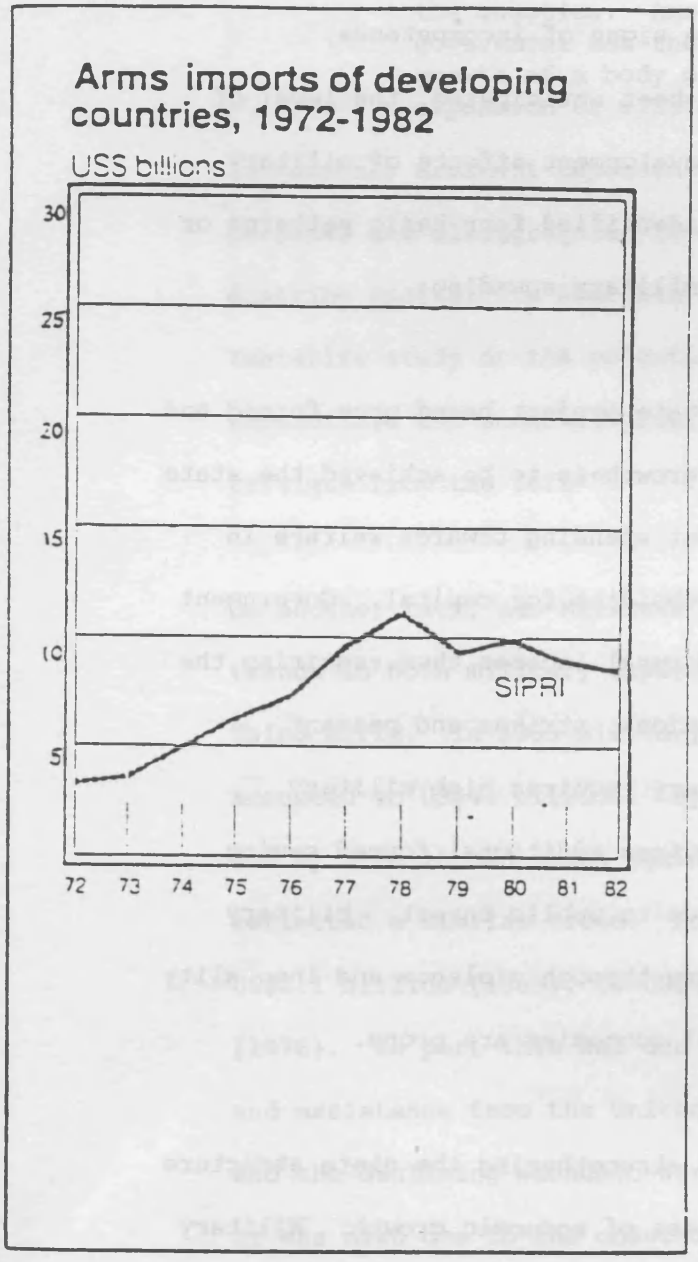
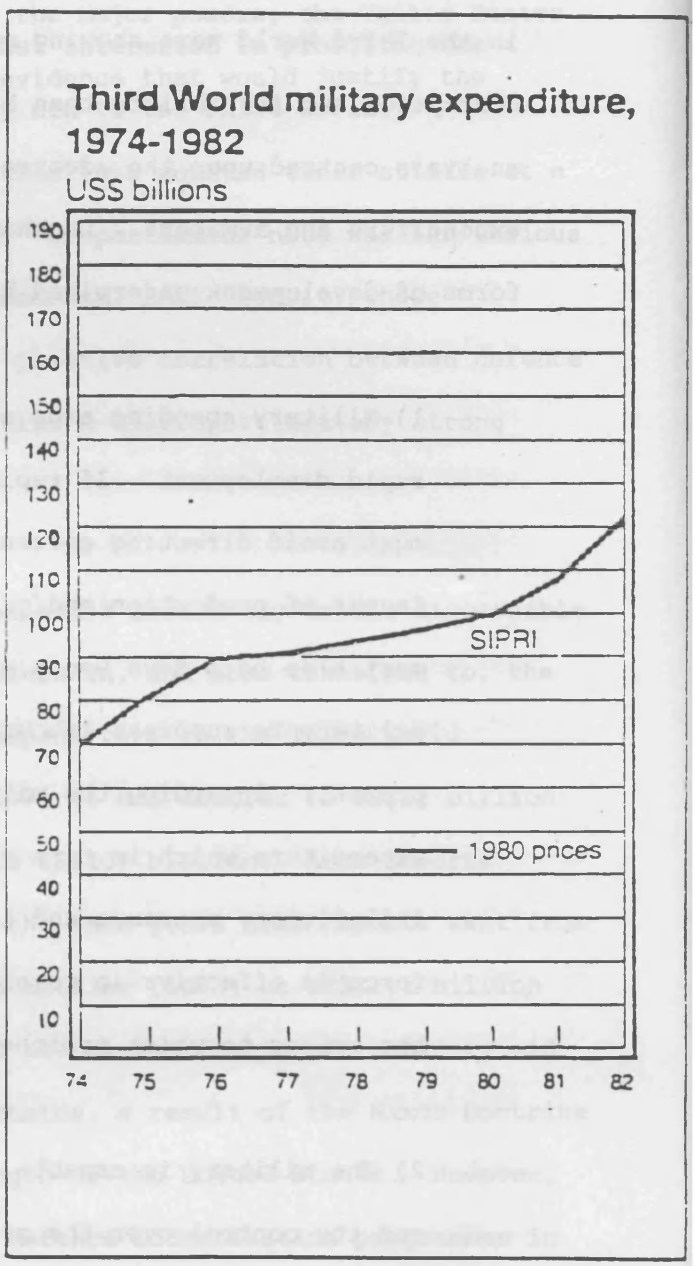


Figure 1.2



Source: Smith, C. (1985), p.188.

3) There is a built-in alliance between armament and the international expansion of capital into peripheral countries. Large and powerful military establishments can guarantee the conditions under which profits can be repatriated to the centre.

4) The military has a vested interest in the alliance with foreign capital. Arms spending adds to the pressure to increase or conserve hard currency earnings and attract foreign investment. Thus, the well documented alliance between the Third World state and international capital created through central planning, licensing and import control, joint ventures and management agreements can be of direct benefit to the military whose interests also lie in increased procurement.[28]

Through these and, other, similar perspectives a small group of neo-Marxists based primarily in Britain, Scandinavia and West Germany drew the question of armament, defence expenditure and militarism into the mainstream dependency debate. By 1980 André Gunder Frank, a major but controversial figure in the dependency school, had become a contributor to the debate and was arguing that the progressive militarisation of society and the steady trend towards arms economies in the Third World was a key factor in the process of world capital accumulation,

> "... the militarisation of state and society in the Third World are the derivatives and instruments of the economic exigencies of capital accumulation on the national level in the Third World, which in turn is an essential part of - and is essentially determined by -

28 Luckham [1986], pp.52-53.

> the process of world capital accumulation, especially during its present period of crisis."[29]

The next stage in the debate, which subsequently became known as the militarisation of the Third World, was an attempt to consider the facilitating mechanisms by which the transfer of military technology from North to South could proceed apace and thereby contribute to the process of underdevelopment. One starting point was the observation by Locke and Wulf that,

> "It is part of history that the military as an institution have always been involved in the process of subjugation, dominance, exploitation and dependence of some social formation by others."[30]

In the colonial era, the success of the colonial states in their efforts to overcome local resistance depended upon superior military technology; advances in the technology of infantry weapons were particularly important. According to Jack Goody military systems in pre-colonial Africa characterised different societies; production systems differed less than might have been expected[31]. Similarly, Kaldor has noted, as others have done before, that military institutions have their time and place - feudalism discovered the stirrup, capitalism emerged with the gun[32].

What emerged from these perspectives is the challenging notion that military technology in pre-colonial and colonial times has had a greater role that hitherto acknowledged in shaping social formations. And, critical to an understanding of how states organise themselves,

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29 Frank [1980].

30 Locke and Wulf [1976], p.1.

31 Goody [1971].

32 Albrecht and Kaldor [1979], pp.1-16.

is an understanding of the role of force in society. To explain the role of force, Kaldor differentiates between the relations of force and the technique of force which together comprise the form of force, which is the specific allocation and organisation of resources for military purposes in any given society. The relations of force - or force structure - comprise the organisation and hierarchy of the armed forces. This is essentially a microcosmic reproduction of the dominant relationships within society as a whole. Thus, feudal armies assumed a very different organisational structure from the modern professional army. The technique of force is armament. The technique of force reflects a combination of available technology and the relations of force. Available technology, such as gunpowder or guidance systems, offer the potential for assimilation into the force structure. But only if appropriate. Some techniques of force may be totally inappropriate for a particular military organisation. Others may take a long time to assimilate either because the military organisation is conservative and/or the technology is revolutionary.[33]

Although the transfer of military technology is conditioned in part by the recipient societies, Kaldor argues that the introduction of the weapons system limits the possibilities for variation in the relations of force. Thus, to an extent, the form of force becomes a reflection of the form of force prevailing in the metropolis. The transfer of military technology is, therefore, a phenomenon of much greater import than hitherto accepted by social scientists. Further, Kaldor argues that the significance is primarily political, that armed forces become ideologically orientated towards the urban élite.

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33 Albrecht and Kaldor [1979], pp.7-15.

Military personnel come to favour and support goals of industrialisation and growth. Moreover, if armament in the West is a product or a reflection of a decaying industrial structure this may mean that the armed forces support the build-up of an industrial structure which is essentially decadent. In terms of underpinning the prevailing economic order, armament ensures the continuation of accumulation in the rich countries and exploitation in poor countries. The answer, argues Kaldor, is a change in policy. However, such a change presupposes far-reaching changes in social structure. The conclusion is pessimistic: current élites, including the armed forces, owe their existence to the present system. Poor peasants, who constitute the majority of the world population, would benefit primarily from a transformation of the system, but they have no power.[34]

The armament and underdevelopment thesis was most comprehensively reviewed in 1979 in a collection of essays pertaining to the impact of military technology on the Third World[35]. The combination of theoretical and analytic chapters with case studies on Iran, South Africa, France and Algeria, Indochina and the Indo-Pakistan war of 1971 provide the definitive work to date on the issue of armament and underdevelopment. Of particular interest to this area is the contribution by Locke and Wulf on the economic consequences of the transfer of military-orientated technology. Although the authors are hampered by the traditional problems of data scarcity and lack of disaggregation, they set out to add substance to the thesis that armament - arms imports (both aid and sales) and indigenous

34 Kaldor [1977], 339-340.

35 Kaldor and Eide [1979].

production - contributes to the process of underdevelopment. They point out that in the discussion on the transfer of technology, the transfer of arms, military advisers and equipment to manufacture arms has been largely neglected. In arguing the point, they put forward the hypothesis that,

> ... in fact, military-orientated transfers of technology are of critical importance in structuring the whole system of technology transfer and, hence, the pattern of technological development.[36]

In their attempt to prove the point, Locke and Wulf put forward four basic points:

First, the import of military technologies reduces the capacity of a developing country to import what is needed for development and industrialisation. Armament constitutes a direct opportunity cost for development. Although global scale armaments constitute a very small, single figure percentage of the commodities entering the world market, when military imports are measured as a percentage of the commodities essential for large scale industrialisation (category #7 of the Standard International Trade Classification) the results are very significant. And since armament cannot contribute to the expansion of industrial capacity, the authors consider the results revealing with regard to development strategies. Furthermore, the import of modern weapons systems leads to an endless chain of demands with a high import content.

Second, those Third World countries which engage in domestic arms production may take an orthodox approach of import, assembly and licensed production culminating in decreasing

36 Locke and Wulf [1979], p.211.

> dependence upon imported know-how and components. However, the specific characteristics of arms production coupled with a limited domestic demand create immediate and inherent problems.
>
> Third, the indigenous production of defence equipment (which extends beyond weapons systems alone) conflicts with the relative factor endowment between industrialised countries and the Third World in general.
>
> Fourth, the introduction of advanced military technology, particularly in the developing countries, is associated with changes in consumption patterns. Military infrastructures disturb traditional sectors, destroy traditional infrastructures and function as a superimposed network.[37]

Locke and Wulf conclude that armament is causally related to underdevelopment. The import of sophisticated capital-intensive technology and, in particular, the establishment of complex arms production programmes, increases the dependence on suppliers from industrialised countries and distorts the pattern of development. To put it more strongly, armaments should be treated as a determining factor in the continuation of uneven development and underdevelopment.[38]

The achievements of these researchers were considerable. They took the relevance of armament to dependency theory to a significant stage by arguing persuasively that military institutions and the technology

37 Locke and Wulf [1979], p.224.

38 Locke and Wulf [1979], p.226.

they absorb are responsible for underpinning not just the relationship between centre and periphery but also the very configuration of world order. To a much greater extent than the modernising school, they looked at the problems of militarism and militarisation in the Third World from less ethnocentric and endogenous positions. More correctly, they held a less passive view of military technology and the military as an institution and their normative stance was rooted in the desire to see the Third World become not just materially richer but also more equal and less violent.

However, intellectually and morally compelling though these arguments may have been, the hypotheses they threw up proved impossible to test. Particularly in relation to the question of armament and disarmament, the utility of dependency theory is open to question. At the outset, West European armament-dependency writers failed to substantiate fully their theoretical position. The incisive quality of their comments on the theoretical relationship between armament and underdevelopment/dependency notwithstanding, it becomes difficult to ascertain from their writings exactly how the problem of the world military order is to be redressed, particularly given the exposure and consequent insecurity of underdeveloped countries. At one level the solution is axiomatic; disarmament will solve the problem of armament. However, at some point it is necessary to disaggregate this equation and discover how and indeed when this will be possible - an essential part of the paradigmatic jigsaw which was never paid much attention and which perhaps in a wider sense prevented the definitive Khunian assault on the prevailing modernising paradigm[39].

39 Khun [1962].

Inherent in the writings of the armament-dependency school is a self-assumed sense of theoretical coherence; a theory of dependency. In fact, the existence of a coherent theory of dependency is an illusion; it never existed,

> Some writers within the dependency school argue that it is misleading to look at dependency as a formal theory, and that no general implications for development can be abstracted from its analyses. Some of those that argue that there is such a theory flatly assert that it leads inescapably to the conclusion that development is impossible within the world capitalist system, thus making development strategies irrelevant, at least within that system. Others, on the other hand, who speak in terms of a theory of dependency, argue that it <u>can</u> be operationalized into a practical development strategy for dependent countries."[40]

Armament-dependency writers proceed with a tacit understanding that a theory of dependency, rather than a school of dependency, exists. The difference is an important one because it begs very basic questions concerning the quest for disarmament. If there is no formal dependency theory then it will follow that there is no formal theory for disarmament in the Third World, in this instance. If development is impossible within the world capitalist system and Third World armament is a product of this system it must follow that disarmament must wait for the collapse of the system. If, however, dependency and disarmament can co-exist, then why should the problem of armament be defined by the dependency school?

In the absence of cogent explanations concerning the passage from armament and underdevelopment to disarmament and development, the alternative is to look for signposts. When found, these prove to be confusing. At one point Kaldor, as quoted above, refers to the

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40 Palma [1981], p.383.

majority of the poor and powerless population who would benefit from a transformation of the system (p34). Elsewhere she talks about how the struggle for disarmament can become institutionalised,

> "The more that public investigation and international diplomacy is diverted into the statistics of the arms trade and the minutiae of calculations about military-technical capabilities, the more difficult it becomes to pursue meaningful disarmament policies and the more likely it is that well-intentioned politicians, peace researchers or disarmament lobbyists will be caught up in the prevailing ideology of military technology."[41]

Taken together, these statements seem to be an attempt to quietly sidestep the critical stage of the debate, namely, a direct move from theorising to practical suggestions for policy makers, the inherent structuralism of the author notwithstanding. What, for example, should or could these authors have been saying to the revolutionary government in Nicaragua in 1980?

The work of Robin Luckham and the Hamburg research group (primarily Locke and Wulf) is somewhat similar. Luckham talks of international anarchy, in the negative rather than in the positive sense of a decentralised system, and presupposes that order can only be obtained through a very different form of international organisation[42]. Elsewhere, he talks about a major global transformation as a fundamental necessity for disarmament,

> "Weapons and military organizations - the means of force - are in the international domain, in that their deployment and/or use is a matter of common danger and common social concern for all mankind. Yet they are still appropriated and controlled by national ruling classes which use or threaten to use them to reproduce their national power and international interests. **This makes social control over their use and conditions of lasting peace almost impossible to bring about without**

41 Kaldor and Eide [1979], p.274.

42 Luckham [1984].

> major transformation in the structures of international production, power and force." (emphasis added).[43]

The Hamburg group highlights the fact that the average Third World army was instituted along conventional patterns which introduced into society a structural variable which by its very nature impedes a self-reliant, development strategy[44].

Commensurate with their perspective on the need for transformation, armament-dependency writers came to stress the need for alternative defence/security regimes. The need to link defence policies to appropriate development is a recurring theme, particularly in the work of Locke and Wulf,

> "The pursuit of legitimate defence by alternative appropriate means corresponding to the available factor endowment of a developing country and compatible with a self-reliant development strategy requires an emancipation from existing military doctrines."[45]

Kaldor and Eide have taken the argument one stage further,

> "An alternative approach would recognise the limited value of most types of sophisticated technology in the third world context and would seek alternative approaches to defence based on alternative forms of force more appropriate to the prevailing social relations ... This would not necessarily involve the rejection of all arms imports ... The point would be ... to organise relations of force around indigenous social conditions, combined with a development strategy aimed at the fulfilment of basic needs rather than the rapid achievement of industrialisation; for, as we have seen, the relations of force which characterise the industrial army are inimical to those objectives."[46]

The authors conclude with the comment that alternative approaches to defence are the subject of future research. However, important

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43 Luckham [1978], p.179.

44 Locke and Wulf [1979], p.228.

45 Locke and Wulf [1979], p.228.

46 Kaldor and Eide [1979], p.274.

though this undoubtedly was at the time, the future research did not materialise anywhere in the world. Thus, to lay persons and experts alike there a few clues as to where developing countries should look for appropriate defence - non-violent civil resistance, the potentially cost effective nuclear option, chemical deterrence, conventional force reductions, a high-low technology mix defence posture? Or would the consideration of questions such as this constitute becoming caught up in the 'prevailing ideology of military technology'?

Taken as a whole there is much to recommend in the work of the armament-dependency school. The late-1970s remains the most intellectually stimulating and productive period for research into the problems of the militarisation of the Third World. During this period the limitations of the modernising school's understanding of military institutions and the defence dilemma facing underdeveloped countries was brought to the fore with considerable clarity. Without doubt, the armament-dependency school has greatly enhanced our understanding of the forces which work against demilitarisation in the Third World.

However, their model for demilitarisation and disarmament in the Third World is sufficiently rigid as to render it deterministic and extremely tenuous. It suggests that international capital is wholly responsible for the militarisation of the Third World and that only international socialism, or its component parts, can be wholly responsible for the demilitarisation of the Third World. Certainly, the quality of the writings under review were sufficiently erudite to avoid the trap of dogma. However, the armament-dependency school

could not avoid ossification. Without policy prescriptions of any hue, lacking in sufficient empirical research to substantiate more fully the claim to paradigmatic status, racked by internal and sometimes petty squabbles over moot points of detail and, often, unpopular within the countries the theories were intended to 'save', mainstream dependency theory slipped quietly from centre stage, ignominiously sidelined by a the resurgent liberalism of the 1980s. Now, ten years on, calls for a New International Economic Order are rarely heard. General and Complete Disarmament is far from the agenda, even within the United Nations. Efforts to persuade the UN member countries that a linkage between disarmament and development would be a net benefit to both North and South have been greeted with a tacit derision. And these positions have been adopted not just because the international community has been infused with a new and much sharper sense of realism, which often appears to border on triage[47]. It has also been due to the intellectual shortcomings of the political left's approach to development, its myopia and its inertia[48].

At the same time, the Third World is no less militarised than it was in the late-1970s, despite statistics which indicate a marked decline in the flow of arms to and military expenditures in the Third World, a standard litmus test for the dependency school. However, before moving on to an analysis of the contemporary situation and the need for a new conceptual framework which will permit a better understanding of the armament process in the Third World, it is

47 The concept of triage connotes the action of choosing according to quality or power.

48 For a useful discussion of this problem see Toye [1985], Chapter 5.

necessary to complete the picture by considering the role of the United Nations in the debate, together with the contributions of liberal opinion shapers and the impact of arms control intiatives. The reasons for a discussion of the UN initiatives are twofold.

First, since the 1960s, the United Nations has maintained a consistent stance in favour of disarmament and development and its level of activity on this issue has been considerable. Second, the United Nations has been responsible for commissioning much of the research in this area, particularly during the 1970s. As such, the overall framework for the research tradition described above has in part been structured by what the United Nations has considered to be the salient issues which, as will be seen, is largely determined by institutional output rather than intellectual reason.

The liberal opinion shaping perspective is included in part to complete the picture but also because of its importance. During the late-1970s and early-1980s it was the work of international figures such as Brandt and Palmé which provided the basis for the Keynesian defence against the resurgence of the modernisation paradigm in the form of the global Reagonomics, unleashed on the Third World at the CANCUN meeting in October 1981[49]. Finally, it would seem appropriate to review the actually existing arms control measures which are currently on the agenda within the Third World, as both the form these initiatives have taken and the weakness of their appeal reflect how far in this instance the real world is from the conceptual framework on offer and, indeed, the resolution of a series of compelling problems.

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49 Blomström and Hettne [1984], p.166.

1.3 Third World Conventional Arms Control and Disarmament within the United Nations

The linking of disarmament and development within the United Nations was preceded by several attempts to control the international trade in arms. During the interwar period, efforts by the League of Nations to quantify the arms trade as a prelude to negotiations concerning restraint and control proved abortive once Europe began to rearm and the system of collective security broke down in the 1930's. After the Second World War, the arms trade gathered momentum and involved to a much greater degree Latin America and the emerging states of Africa and Asia. The arms trade and the rise in national defence expenditures throughout the world became a major source of concern for the infant United Nations. There evolved a double edged approach to armament and disarmament issues relating to the Third World; the control of arms transfers and, somewhat later, the linking of disarmament and development.

The urgent need to quantify and control arms transfers was frustrated by the uncooperative attitude of both exporters and importers, ergo a large proportion of UN members states. Consequently, it was not until 1965 that Malta, a country involved in neither the import nor export of arms, invited the Eighteen Nation Disarmament Committee (now the Conference on Disarmament) to consider the arms trade. In the event the superpowers were disinterested and non-producers demanded the gathering of information on arms production as well as imports. Further proposals in 1967 by Denmark and in 1970 by Sweden

and Britain were attempts to gain a consensus on arms trade registration as a limited, first step towards control. However, the non-producing countries took the view that the proposals were discriminatory.[50]

Interest from within the United Nations on the linkage between disarmament and development dates from 1950 when the General Assembly stated its intentions under Resolution 380(V) to 'reduce to a minimum the diversion for armaments of its human and economic resources for the general welfare, with due regard to the needs of the under-developed areas of the world'. In the same year India submitted a draft resolution to the General Assembly calling for the establishment of a Peace Fund with a remit to finance development projects from the resources saved through disarmament. Similar proposals were put forward by France in 1955, the USSR in 1956 and Brazil in 1964[51].

Against the backdrop of an emerging nuclear parity between the superpowers, limited success in arms control in the form of the Antarctic Treaty (1959), reopened negotiations on a nuclear test ban and the formation of the Ten Nation Disarmament Committee[52], the UN commissioned the first of several reports on the Economic and Social Consequences of the Arms Race to examine the consequences for disarmament. The General Assembly requested an examination of the effects at a national level, within different economic systems and in

50 SIPRI [1971], pp.100, 107.

51 United Nations [1982], pp.136-138.

52 For a history of the Conference on Disarmament see Graham, M. [1984].

countries at differing levels of development, including the likely effects upon demand, world trade and the possible structural imbalances which would be caused within and between nations following disarmament. In other words it was intended as a form of planning for disarmament; at one level it was a policy related document in spite of its utopianism. The purpose was to facilitate 'the utilization of resources released by disarmament for the purpose of economic development, in particular of the underdeveloped countries'. This was based upon a common sense equation; the high and rising level of military expenditures constitutes a waste of resources and would be better spent on development efforts.

The report, prepared by a distinguished panel of experts including Wassily Leontif and J.K. Galbraith as a consultant, stated the issues and the problems with particular clarity. The sense of urgency underpinning the mood in favour of disarmament stemmed mainly from the threat of mass destruction. However, in addition,

> "... it comes from the consciousness that the resources that make this threat possible, and many more resources devoted to less spectacularly military uses, are being diverted from the tasks of lightening the burdens and enriching the lives of individuals and society ... there is no doubt that it [the burden] is substantial."[53]

In conjunction with this report two empirical studies were carried out on the conversion of military industries to civilian production and both concluded that disarmament would have a major, positive impact upon international economic relations, particularly in relation to trade, aid and investment.

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53 United Nations [1962], pp.1-4.

This report laid the foundations for what became known as the 'disarmament dividend' which subsequently became the central theme for all other UN reports on this subject. The 1970s and the early 1980s were particularly productive periods during which a series of expert groups prepared three reports on the Economic and Social Consequences of the Arms Race and of Military Expenditures[54], on the Reduction of Military Budgets[55], and on Disarmament and Development[56].

The disarmament dividend has remained the motive for establishing an institutional link between disarmament and development efforts within the United Nations. The moral and political framework has been made all the more robust by the tacit acknowledgement that making the case for one strengthens the appeal of the other. Thus, the attempt to canonise the 'disarmament dividend' - the resources released by the disarmament process - and thereby ensure the potential at least for increased social and economic development became a cause célèbre within the United Nations. The most recent report, chaired by Inga Thorsson, echoes the same sentiments. It has developed a far more sophisticated analysis of the ways in which resources might be transferred, but it presents essentially the same thesis. Understandably, many were arrested by the logic of the linkage. Rooted in the familiar rhetoric of the United Nations, it appealed to international civil servants; many of the aims and ideals of the United Nations were enshrined in a single concept. World leaders found a broad and moralistic theme for their speeches. Campaign

54 United Nations [1972].

55 United Nations [1983].

56 United Nations [1982]

groups and activists in both disarmament and development spotted fertile ground and academics identified a springboard into an entirely new area - the relationship between armament and underdevelopment.

However, unseen or misunderstood by many, the establishment of a disarmament-development link performed a specific function within the United Nations - almost a hidden agenda. This related to the move away by the most powerful states, notably the superpowers, from a declared policy of disarmament to one of arms limitation and control during the 1960s. The concept of a disarmament dividend was closely associated with attempts within the United Nations to keep alive the ultimate goal of General and Complete Disarmament (GCD). To many in the field of international relations and strategic studies, GCD is at best a diversion, if not an irrelevance - an idealist notion which would be impossible to realise. Within the machinery of the United Nations, however, it remains a powerful symbol. This relates to the intended function of the United Nations to play the role of broker in a common security system. During the days of the League of Nations, the aim of GCD was a fundamental tenet. The United Nations has placed rather less emphasis upon it, focusing instead upon the need to establish a measure of common security which does not fundamentally alter the system through which that security was guaranteed. Nevertheless, it implies that, at some future date, it will be possible to maintain the security of nations without resort to either the need for arms or war. Only then can the vast resources presently assigned to armament be transferred to economic and social development. Seen in this light, the UN-based disarmament and development approach was a powerful metaphor in the struggle to alter

perceptions which have, over time, institutionalised a realpolitik approach to global problems in general and arms control/disarmament in particular.

After a decade of fervent activity in this area, the 1980s witnessed near total inertia in this subject area. At the most superficial level the reason was the collapse of détente and the crisis in East-West relations. The sudden and unsuspected level of attention which focused upon defence issues and the brief possibility of a change in the configuration of the Atlantic Alliance demanded a sustained response and input from peace researchers. In this milieu the question and relevance of the militarisation of the Third World suddenly became less topical and almost inconsequential, overshadowed by other possibilities for disarmament in the North. However, there were other, more subtle reasons for this rapid relocation of perspectives and priorities. The armament/disarmament and underdevelopment/development debate had also worked itself into an intellectual cul de sac. There were three inter-related reasons for this decline. First, the debate was Eurocentric; the centre of gravity remained too much in Western Europe. The process of researching the dynamics of Third World militarisation from the West alone is inherently unsatisfactory. The lack of data on the political economy of militarisation has proved to be an enormous stumbling block. Economists and econometricians in particular have had considerable difficulty in applying their skills to the problem. Governments in the Third World and the Socialist bloc have consistently refused to release useful statistics and information on military expenditure, arms imports, indigenous production and defence policy. This is a problem firmly rooted in the notion that at any

level of defence the release of information confers an advantage upon potential aggressors. Consequently, from the peace research perspective at least, few regional or individual case studies have been attempted and the cross-national studies which have been completed have failed to make substantive cases in either direction[57].

These problems would have been alleviated had there been a more significant input from within the Third World. This is the second reason for the decline. The majority of intellectuals and researchers from within the Third World have barely accepted the argument that military expenditure and arms imports have been too high and should be cut back in the interests of disarmament and development. Certainly it can be argued that potential contributions from within the Third World were hampered by a more severe dearth of information than exists in the West. Even more problematic, however, is the fact that advanced military technology is inextricably bound up with images of nation building; a multi-option, advanced defence posture is considered a definitive hallmark of modernity and development. Consequently, defence procurement is rarely viewed with alarm, particularly if the rationale is external rather than internal security. In addition, the opinion shaping and research community has never successfully comes to terms with the fact that, broadly speaking, advanced military technology is generally popular within most Third World countries and, often, the costs incurred are thought to be worthwhile.

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57 See for example Smith and Smith, [1983].

The third and more ambiguous reason concerns the reactive element of the debate and the concomitant failure to develop a prescriptive element. The preoccupation of the West European research community with the perceived failures of the liberal/conservative approach to the problem of militarism and militarisation has already been noted, as have the former's theoretical shortcomings. To this may be added the political nature of the original debate on disarmament and development within the United Nations and the intentional aversion to detail and case study. As a result of both these factors the debate tended towards the proscriptive; a failing legitimised by the lack of data available. Inherent in the disarmament and development debate of the 1970s was an unstated and stark separation; disarmament came to connote an outright rejection of armament and the problem of security before, during and after the disarmament process was ignored. Thus, armament became linked to underdevelopment, security to power and disarmament to positive peace. It was an attempt to refute the realpolitik approach to international politics and profer an alternative system based more upon idealism. However, in so doing, the baby was thrown out with the bathwater. The armament-security-power framework, the realist paradigm, was totally abandoned on the basis of a cause and effect relationship to war, underdevelopment and centre-periphery dependency. There was a negligible consideration of how the armament process in the Third World could be reversed. Nor was there any consideration of alternative concepts of defence and security, in stark contrast to the growing trend towards 'another' development.

1.4 Arms Control and Disarmament Outside the United Nations: Controlling the Horizontal Spread of Conventional Military Technology

Given the conspicuous absence of any agreement in principle within the United Nations on the need to quantify arms transfers prior to any discussion of control, it is hardly surprising that efforts outside the United Nations have also failed. Soviet proposals in the 1950's to limit the flow of arms to the Middle East were rejected by the United States. Proposals by the United States on the same issue after the 1967 war were rejected on the basis of the Israeli occupation of Arab territory. Superpower efforts to reach agreement on the destruction of obsolete weapons systems which began with Dean Rusk's proposal in 1964 for 'bonfires of bombers' failed due to conceptual weakness. A major study published in 1964 by the Massachusetts Institute of Technology which advocated supplier agreements was virtually ignored, as was the 1965 report on international co-operation prepared by the committee on Arms Control and Disarmament of the National Citizen's Committee[58]. A proposal in 1969 by the Western European Union's (WEU)[59] Committee on Defence Questions and Armaments to investigate further the control of the arms trade was rejected by the WEU Council on the grounds of complexity and remit; unable to decide upon appealing for a limitation upon arms sales or armament limitation in general the proposal received little support from the WEU Council and eventually

58 SIPRI [1971], pp.114, 115.

59 Members of the WEU are Belgium, France, Luxembour, the Netherlands, UK, FRG and Italy.

opted for the traditional non-starter - a trade registration proposal.[60]

The early 1970's witnessed a nadir in concern over the military build-up and arms imports of Third World countries. There were both positive and negative reasons for this. On the one hand, it was a period of détente, strategic arms limitation agreements, nuclear non-proliferation and biological disarmament. Moreover, during the same period, the development agenda was particularly expansive, encompassing as it did items such as a New International Economic Order and the linking of disarmament, development and human rights. Arms transfer control was tacitly acknowledged to be a part of this process of change involving both sustainable development and demilitarisation.

Obversely, it was also a period of economic crisis in the West during which time the United States experienced an unprecedented balance of payments crisis (1971) and, later, when massive amounts of petrodollars flowed into the OPEC countries in the Middle East. During this period the divide between hegemonic and industrial patterns of arms supply became blurred. These changed conditions, coupled with the particular political environment which enabled the election of Jimmy Carter as President, permitted the major arms trade control initiative of the 1970s - the bilateral superpower Conventional Arms Transfer talks initiated by the Americans in 1977. However, the optimism which defined Carter's personal approach to the pressing international issues of the time was overshadowed and eventually destroyed by a mix of bureaucratic obstruction, double

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60 SIPRI [1971], pp.108-109.

standards, naivety on Carter's part and, finally, the Soviet invasion of Afghanistan, problems within the Soviet bloc centred on Poland, the disintegration of détente and the revolution in Iran which led to the taking of American hostages[61].

The failure to control the flow of arms from North to South is rooted in the inescapable fact that restraint is generally seen to be against the interests of both suppliers and recipients. By and large, the several attempts at restraint have been reactive measures animated by the effects, rather than the causes of violent breakdowns in the international system. Thus, it was the inordinate bloodletting of the First World War and the partial responsibility of the 'merchants of death' which prompted concern within the League of Nations. The embargoes enforced during the Indo-Pakistan war of 1965, and the Six Day War of 1967, were reactive measures which followed the mutual recognition on the part of both the superpowers and their allies that wars in sensitive geo-political areas of the Third World could ramify into direct superpower confrontation. The CAT talks initiated by President Carter were a consequence of the new President's resolve to raise the moral standard of American foreign policy above the prevailing level of crude economic gain and political advantage. And Carter himself was elected to office partly as a result of America's existential crisis following Vietnam and Watergate.

The lessons of the 1970's may have introduced more checks and controls into how and when the major suppliers sell arms to the Third

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61 For a review and analysis of the CAT talks see, Blechman, Nolan and Platt [1982].

World; witness the continuing tension between the American legislature and the executive over arms sales to the Middle East and Pakistan and the retention of elements of restrictiveness in most national arms export policies. However, at no point were the major exporters ever committed as a body to the negotiation of a policy of control or restraint. The reasons for this apathy are unequivocally the driving forces of the arms trade.

1.5 Common Security, Arms Control and the Third World

The problem facing those who argue the need for arms control and disarmament in the Third World is that radical changes in defence policies are not yet seen to be in line with national interests. In so far as security and defence are locked together at the conceptual level, all countries seem to perceive a direct relationship between national security and advanced military technology, although there are exceptions to this rule, such as Mao Zedong's China.

Within the Third World, security considerations are both visible and paramount. Whilst it may be argued that other countries place no less emphasis upon national and collective security arrangements, it is also the case that the emphasis and concern is less sharp. For the past four decades Europe has been able to avoid war. However, during the same period the Third World has experienced over sixty-three conflicts involving the death of over sixteen million people. U.S., Soviet, British and French forces have intervened in disputes and conflicts in the Third World, as and when their interests appear sufficiently threatened. US forces alone were used in 262 incidents

between 1946 and 1982, most of which were located in the Third World[62]. Unlike Europe, territorial disputes are common and widespread ranging from frequent border skirmishes to irredentist claims and sub-imperialism. Third World states generally perceive themselves to be more vulnerable than developed countries. Over the late-1980s, there have been a series of positive moves towards terminating some of the more intractable conflicts in the Third World, such as the Gulf War and the Soviet occupation of Afghanistan. However, at the same time, ethnic disturbances are on the increase, as are the accompanying levels of violence, bloodshed and international anarchy.

In their approach to external security issues Third World, states place great store on defence as a means of safeguarding political independence and territorial integrity. Often overlooked by contemporary historians is the magnitude of change which occurred in Africa and Asia between 1945 and 1960. No less than forty countries and one quarter of the world's population revolted against colonialism and won independence. Once change had been achieved the problem of defending the new status quo became paramount. Given the degree of tension within the Third World, between North and South and East and West, and the interface between the three, defence became of the upmost concern. Certainly, there were attempts to reduce the taxing demands of defence. For example, Jawaharlal Nehru tried between 1947 and 1962 to construct a new foreign policy for India based upon non-alignment. He also attempted to design a defence policy commensurate with his ambitions for foreign policy. Both failed, in part because of the Sino-Indian war but also because Nehru

62 Blechman and Kaplan [1978].

and his advisers could not translate their political ambitions into military strategy and doctrine. Another casualty of the Sino-Indian war was the powerful spirit of Bandung. The ensuing loss of dynamism greatly affected the future of the non-aligned movement and the potential for a new form of collective security.

The unavoidable fact of contemporary life in the Third World is that regional security moves and initiatives have largely failed to guarantee security. Instead, in the face of failures on the diplomatic and foreign policy fronts, states have relied upon gradually increasing defence expenditure and modernising defence capabilities - in policy making spheres at least realism remains in the ascendancy. Of late, there has been a refreshing acknowledgement of this dilemma in several quarters. Whilst the arms race in the Third World is universally recognised as deleterious for development progress, equally, there is a growing acceptance that new approaches are required which would effectively redefine security and offer new alternatives to the defence-security dilemma in the Third World.

During the early 1980s, when East-West relations were at a low ebb and when deep seated structural problems in the global system became evident, a series of reports from West European liberal opinion shapers advocated far reaching and wide ranging reforms to the international system. The Report of the Independent Commission on Disarmament and Security Issues, the so-called Palmé Report, is one such example[63]. Although the bulk of intellectual effort was directed towards the pressing need for arms control and disarmament

63 Independent Commission on Disarmament and Security Issues [1982].

in Europe, the report also projected a particular perspective on the negative effects of armament and military expenditure in the Third World.

Where the report differed from previous intiatives was in its outspoken condemnation of the attainment of security through the pursuit of relative power. The intellectual direction of the report was a thinly veiled attack upon realism from the interdependency perspective. Instead, the Commission advocated an approach to security based upon co-operation, hence the development of the common security concept. Although the tenets of common security apply to countries in both North and South, the Commission saw an increase in collective security measures as particularly important. In addition to a proposal to increase the effectiveness of the United Nations, the Commission advocated other, specific proposals - nuclear weapon free zones, conferences on security and cooperation, regional zones of peace, increased control over the nuclear fuel cycle, wider adherence to the Non-Proliferation Treaty and control over arms transfers[64].

The report has been followed by several other attempts to broaden the parameters of the security debate pertaining to the Third World. Those who once advocated a linkage between disarmament and development now advocate a dynamic relationship between disarmament, development and security, witness the outcome of the most recent UN conference on Disarmament and Development. Influential environmentalists have entered the debate bringing with them a new

64 Independent Commission on Disarmament and Security Issues [1982], p.157-172.

perspective on the relationship between militarisation and the environment. The Socialist International has made a similar point, but in a different way, arguing that armament and conflict are inseparable from the battle against poverty and underdevelopment, which is rapidly being lost[65]. In a recent Worldwatch Report, Lester Brown has argued that the extensive deterioration of natural support systems and the declining conditions evident in many parts of the Third World pose dire threats to national and international security that now rival the traditional military threats. Consequently, there is an urgent need to redefine national security to encompass economic and environmental factors[66]. Given the recent events in, for example, the American continent and South Asia regarding the causal relationship between environmental abuse and 'natural' disasters, environmentalists may soon be warning of 'environmental wars' as a last-ditch means of preventing national development projects in one country or region reversing the same or similar in another. Or, put another way, what could the USA do if, beyond reasonable doubt, a clear link could be established between the destruction of the Amazonian rain forests and the severe drought which brought such hardship to the mid-West in 1988?

These influential opinion-shapers have rendered both a service and a diservice to our understanding of armament and disarmament issues in the Third World. Without doubt, there are undeniable benefits in looking at the security problem through 'green tinted' spectacles. A broader perspective raises the highly relevant question of the

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65 The Report of the Socialist International Committee on Economic Policy [1985], p.196.

66 Worldwatch Institute [1986], pp.195-211.

relationship between national security and people's security[67] and the role of the state in national development. It alerts decision-makers and the public to the severity of environmental crisis and the impotence of the national security framework; common security offers a conceptual alternative to an overburdened international system in which the question of survival rather than progress is becoming increasingly more germane. Of particular importance for the Third World, it highlights one essential paradox; arms imports and high levels of military expenditure are seen by states as fulfilling security demands and underpinning sovereignty but in practice they may do neither.

Obversely, the common security debate contains within it a degree of confusion which diminishes its appeal and credibility. At the prescriptive level, common security amounts to little more than a shopping list of global reforms; the attempts to design or outline implementing policies are either weak or non-existent[68]. Furthermore, the current debate fails to grasp the tallest nettle, namely, it does nothing to suggest that, at present, an alternative (or much reformed) international security regime would appeal to the interests of Third World governments, which is an essential precondition for change. For example, a prevailing, underlying assumption is that the East-West conflict in general and the Cold War in particular has continued to the disadvantage of the Third World. High levels of military expenditure are often considered inappropriate and damaging for Third World countries and underpin the dependency of the South upon the North. Yet, more often, Third World

67 Deshingkar [1982].

68 Buzan [1987a].

élites do not accept the linkage between armament and underdevelopment. Instead, defence is considered essential and a means of complimenting, stimulating and protecting development. Above all, those who advocate new security regimes often overlook just how popular advanced military technology is in the Third World. In both the policy-making and the public domain, it is seen as essential. Finally, there is little consideration of how the obstacles to a less imperfect world might be overcome. What, for example, can be said of the myriad vested interests which will inevitably need to be confronted, including those of bureaucrats protecting their turf? What too can be done to arrest the momentum gathered by both advanced technology and the action-reaction cycle which inevitably accompanies any form of arms racing? What policies are necessary to put the armament process into reverse?

The prospects for controlling the armament process in the Third World begin to appear very confusing. On the one hand, the spiralling price of arms and the declining fortunes of Third World countries, both inside and outside OPEC, suggest that any regional or global initiatives aimed at creating new security regimes and reducing the pressure on defence budgets would be welcomed as initial steps towards arms control. Recent developments in Latin America would seem to support this view. Initiatives from President Alan Garcia of Peru and complementary steps by the Contadora group have been geared to the reduction of military expenditures and a freeze on conventional armament imports into the region. Garcia's proposals may in the future be accepted by the Andean countries - Argentina, Bolivia, Chile, Ecuador and Peru - although the Brazilian claim that

regional intiatives should be dependent upon positive moves by the superpowers is an obstacle.

In 1985 the Review Conference of the Non-Proliferation Treaty (NPT) emerged with a consensus that surprised many observers. Although the non-nuclear weapons states mounted a legitimate attack against the nuclear club for failing in their commitment to reverse the nuclear arms race, the regime has survived intact. Indeed, in 1985 the Pakistani President, the late General Zia, pledged to join the NPT providing India did the same. A positive response by India is unlikely, given that country's long-standing opposition to the NPT, but future forward momentum in this direction could greatly strengthen the regime. The emergence of Benazir Bhutto undoubtedly augers well for a more normal course of events in South Asia, but scarcely enough to halt the nuclear arms race in the region.

In addition, there have been several other promising moves towards enhancing regional security. With the increasing possibility of political change in South Africa, there also exists the possibility of an African Nuclear Weapon Free Zone; all countries bar South Africa support such an initiative. In September 1985 the South Pacific Forum opened a treaty to establish the South Pacific as a nuclear free zone and signatories thus far include Australia, New Zealand and Fiji. In early 1986 North Korea pledged to launch an anti-imperialist and anti-nuclear campaign to rid the Korean peninsular of nuclear weapons and create thereby a nuclear free zone. The USSR and Japan have started talks based upon Far East Confidence Building Measures aimed at the concern of the Soviet Union's eastern neighbours lest arms control measures in Europe take place at the

expense of a Soviet nuclear build-up in the East. China, Taiwan, North and South Korea are also involved. In December 1985, India and Pakistan reached agreement not to attack each other's nuclear facilities. In addition, negotiations over a non-aggression pact or a treaty of friendship are ongoing which keeps open the possibility of a South Asian nuclear weapon free zone. In early 1986 the leaders of New Zealand and Indonesia met to discuss the possibility of pursuing a South East Asian Zone of Peace.[69] Last, but not least, the recent INF agreement and the concomitant new détente between East and West suggests that there exists a new momentum towards achieving a more settled international system.

Yet, these initiatives should be taken for what they are and for what is excluded - they are both partial and cosmetic. The prospect of a Middle East nuclear weapon free zone is nowhere near the agenda and Israel continues to enjoy the benefits of a nuclear weapons policy based upon ambiguity. Negotiations over creating the Indian Ocean as a zone of peace have languished. Political change in South Africa would virtually obviate the need to create a nuclear weapon free zone in Africa, temporarily at least, unless a successor regime discovers a bomb in the basement and equivocates over what to do with it. The Garcia initiative in Latin America is hardly a departure. In 1974 the Declaration of Ayacucho committed the Andean group plus Argentina and Panama to the creation of conditions permitting an effective limitation of armaments and an end to their acquisition for offensive purposes, but arms production and imports did not subside thereafter. In 1978, a conference was convened to consider exclusively the

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69 Details of these and other arms control negotiations can be found in the authoritative Arms Control Reporter produced by the Institute for Defence and Disarmament Studies, Brookline, Mass.

problem of conventional arms control in the region, followed in 1980 by the adoption of a Charter of Conduct on the peaceful settlement of disputes[70]. Significantly, none of these initiatives have included, or received blessing from Brazil, the major power in the region.

The NPT has survived so far due to its imperfections. Article X permits the signatories to leave the regime with three months notice, should their security interests be so threatened. The third NPT Review Conference succeeded for negative rather than positive reasons. In the prevailing international climate the collapse of a major arms control regime would have been extremely serious. Access to nuclear technology, a major problem for previous review conferences, is no longer a problem given the current recession in the nuclear market place and reduced forecasts for nuclear energy growth through the end of the century[71]. Moreover, the NPT comes up for renegotiation in 1995; the benefits of destroying or degrading the regime until then are few. Finally, the level of interest and commitment to a chemical weapon non-proliferation regime is lamentably low, given the current situation[72]. All in all arms control has largely failed, in no shape or form does it really address the real security problems of Third World countries.

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70 For a discussion of the Latin American proposals which preceded the Garcia initiative see, Goldblat and Milan [1982].

71 Reiss [1985], pp.226-234.

72 For a review of the proliferation of chemical weapon capabilities see Ember [1986], pp.8-16.

CHAPTER TWO

THE ARMAMENT PROCESS IN THE THIRD WORLD: TOWARDS A NEW CONCEPTUAL FRAMEWORK

2.1 The Limitations of Development Studies

In the previous chapter two major development paradigms/schools have been discussed in relation to their approach to what might broadly be described as the armament process in the Third World. It has been argued that both contain remarkable shortcomings in their ability to analyse comprehensively the complexity of military institutions, defence technology and the competing claims of national security requirements and development needs. Thus, the modernising paradigm looked solely at the role of military institutions and largely ignored the growing evidence pointing towards both the deleterious effects of defence expenditure upon development (or argued that the opposite was true). Equally poorly understood was the role of the military in defending governments which appeared to be increasingly unable to manage the complex economic, political, social and cultural aspects of the development process. In attacking the shortcomings of the prevailing paradigm, the emerging school of dependency stressed the negative impact of the military on development and sought linkages between military institutions, the technology they assimilated and the resources they absorbed, to both the maintenance of underdevelopment at the national level and to the divisions between North and South.

During the early-1980s, the cutting edge of the development debate was usurped by a reformed and revitalised (neo-)liberal paradigm. The assault upon the centre stage was so effective and rapid that within a few months the neo-liberal agenda had impacted in a major way upon the economic policies of many developing countries. The heady rise of the neo-liberal paradigm has been documented elsewhere[1] but two aspects of this phenomenon are relevant to the way in which the defence sector in the Third World might be understood in the future.

First, notwithstanding the failure of the dependency school to sustain its treatment of militarisation and demilitarisation in the Third World, all allusions and direct observations to either the positive or the negative impact of the defence sector have been omitted - they have slipped from their traditionally low position on the development agenda into virtual obscurity. Even the punishing effects of war or the advanced conditions of insecurity, such as exist in Southern Africa, have failed to qualify some states as special cases. No real concern is paid to the inescapable fact that wars in the Third World create their own particular form of structural adjustment.

Nevertheless, the movement of defence and security issues to the outer limits of the development debate is consistent with the neo-liberal framework for analysis which in essence turns on the role of the state in the development process. Essentially, neo-liberalism seeks to reduce the role of the state which, in economic terms, requires that government expenditure be cut to the minimum for,

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1 For a particularly good account see Toye [1987].

although necessary in some instances, it is also seen as a drag on the economy in so far as it limits the scope of the enterprise/private sector to maximise investment and reduces the spending power of the household.

The question of military/defence expenditure poses something of a problem within this paradigm. Whereas there is scope for debate, manoeuvre and interpretation when, for example, health and education issues are addressed, witness the ongoing debate over the charging of user fees, the options for reducing the role of the state when it comes to security issues is apparently minimal. Moreover, the two major international organisations primarily responsible for implementing the policies most favoured by neo-liberals, the World Bank and the International Monetary Fund (IMF), have traditionally fought shy of raising questions relating to defence expenditure and defence procurement. This is understandable and has little to do with what some might see as a conspiracy of silence designed to protect military institutions in the Third World and ignore both geo-political exigencies and the international trade in defence equipment, which has become so crucial to the ability of the smaller NATO countries to keep their own defence expenditures within politically acceptable fiscal limits. More realistically, both the Bank and the Fund fight shy of raising these issues because, as primarily financial organisations, defence considerations are patently outside their remit.

Moreover, there would be very real problems associated with such organisations informing a developing country that military expenditures must decline or procurement preferences be foregone, if

loans are to be forthcoming. For to do so would be to trample upon the basic right of all governments to exercise their sovereignty when it comes to an assessment of external threat and the requisite defence preparedness. Many of the defence-related policy decisions taken by most Third World governments may often be wrong but this does not ipso facto give the IMF or the World Bank the right to intervene in this particular sector even though there are known examples of this occurring, albeit in a guarded fashion; for example, it is known that the IMF brought up the question of military aircraft procurement during talks with the Peruvian Government and more recently with the Jordanian Government over the purchase of the Tornado multi-role combat aircraft[2].

Much less defensible, however, is the persistent failure to recognise the debilitating effects of war, for which there is no real explanation except for Reg Green's observation that neo-liberals and World Bank officials may both feel ill-equipped to tackle anything related to the economics of war, which is essentially the economics of intervention, and, furthermore, that to admit the degree to which war impacts upon the economy of a developing country might reopen the door to state economic intervention[3]. Nor, apparently, is there any regard for the difficulties faced by elected governments when it comes to the implementation of policies favoured by the IMF. Prior to the election of Benazir Bhutto in late-1988, the IMF negotiated a particularly tough set of conditions with the Pakistani bureaucracy. Ms Bhutto's political future, which may be inseparable from the future of democracy in Pakistan, may yet hinge upon whether or not

2 Andoni [1989].

3 Green [1988], pp.7-8.

the new Prime Minister has the political skill and fortune to absorb the inevitable popular protest which will emerge in response to the IMF package. A very similar situation currently exists in Ecuador.

At first glance it is tempting to be extremely critical of this development given the clear links between international debt, democracy and militarisation. Demilitarisation, it may be argued, is the obverse of democratisation and respect for human rights. The elimination of the former from the debate suggests that the entire currency of development has been devalued and this has led in turn to the proferring of development strategies which lack the basic qualities of humanism, dignity and equality. Nor would it seem appropriate or even honest to eliminate the costs and effects of war from the development agenda in certain regions of the Third World. Moreover, the passive nature of the neo-liberal response to much or most of what the defence sector represents in development terms can be ascribed to a series of ideologically convenient oversights in so far as any discussion of the defence sector in the Third World brings into sharp relief numerous moral and political questions relating to development and underdevelopment. And these are precisely some of the issues which neo-liberalism has attempted to erase from the agenda.

In addition, there is evidence here of institutional inertia - being unable to respond directly to defence related issues and problems does not mean that organisations such as the Bank and the IMF should remain forever oblivious to the working of individual defence sectors. Thus, for example, the World Bank was outraged when, in the early-1980s, India agreed to purchase the Mirage 2000 from France

only weeks after having negotiated a major loan from the World Bank[4]. Yet, embarrassing though this was for the Bank should outside observers remark that the funding intended for sectoral and macroeconomic medium term production/supply based development should instead be subsidising the purchase of one of the most expensive combat aircraft on the open market, it was also the case that nobody in the Bank appeared to know about a deal which had been in both the offing and the news since 1978.

The second aspect of note is that the emphasis of the neo-liberal paradigm is unequivocally centred upon development policy rather than theory, although the theoretical underpinnings are clear enough. Certainly, it is not the case that this will lead in the future to the evolution of a coherent framework capable for tackling at the policy level the contradictions which relate to the interlocking aspects of Third World security issues - defence will certainly remain outside the remit of those responsible for shaping and implementing policy. However, it is the case that development studies is now being encouraged if not forced to relate most areas of concern to policy, which has marginalised the more esoteric research areas and focused thinking upon the immediate and pressing problems of the 1980s. Nevertheless, there are significant costs involved as all too few now have the opportunity to undertake quality research, in-depth studies and use cross-disciplinary skills. However, the current focus upon the need for implementing policies can only be a positive development in principle, although in practice the policies adopted by neo-liberals are open to criticism on many counts.

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4 Conversations with the author, Washington, July 1988.

Nevertheless, the marginalisation of defence and disarmament issues should not be considered a totally negative development. The circular logic and pious undertones of the dependency school endowed the debate with a particularly unhelpful vocabularly which was intended to mean a great deal but in effect amounted to very little. Thus, the debate became a hostage to a conceptual framework which is most unlikely ever to be realised, witness the continuous need to link disarmament and development as a preliminary step towards Third World demilitarisation. Although few alternative perspectives exist at present, it is now possible to discuss the issues without consistent reference to untenable concepts. Furthermore, there is a new urgency within development studies to link the solving of problems to the development of policies.

Throughout much of the recent literature relating to development studies theory and the 'state of the debate', it is remarkable how little attention is afforded both international relations as a subject discipline and recent debates within the field. At the outset, it is reasonable to suggest that if the post-war study of international relations had evolved in a less US-dominated and ethnocentric fashion, the need for a separate discipline of development studies might well have been unnecessary.

Recent theoretical developments within the field of international relations, coupled with the inability of the neo-liberal paradigm to encompass issues relating to defence and militarisation in the Third World, suggest that a tentative bonding of the two areas might provide a more productive framework for analysis. Indeed, to a great extent, the issues which have thus far been discussed in relation to

development paradigms have all too frequently been considered within the ambit of international relations. This is particularly the case with the arms trade, where much of the work has been primarily descriptive, witness the early treatment of the subject by Stanley and Pearton and, to a lesser extent, the Stockholm International Peace Research Institute[5].

The bifurcation between development studies and international relations in this instance stems from a gross methodological error; namely that the transfer of military technology and the politics which underlie are considered to be within the remit of international relations, whereas the impact and effects, particularly at the intranational level, are within the domain of development studies. It is largely for this reason that the overall treatment of the subject area reflects a curious form of impotence - fragmented on the one hand and significantly weak in the formation of implementing policies on the other.

The division is made all the more questionable when the broad development of the two disciplines are compared. The theoretical contours of the development and international relations debates parallel each other to an extent. International relations as a distinct subject of academic enquiry emerged as a direct result of the First World War and the universally accepted notion that a prevention of future wars of this type was urgently required in the form of a new world order. For a brief period the Idealist tradition held sway, only to be unequivocally marginalised by the onset of the

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5 Stanley & Pearton [1972]; SIPRI [1971].

Second World War and the total failure of both mediation and rational decision-making as mechanisms for the prevention of war.

In the immediate post-war period, Idealism was greatly overshadowed by Realism, which posited a very different view of the international community and the motivations of individual nation-states. The basis of the Realist view directly contradicted the faith placed in the international system's acknowledgement of the dysfunctional aspects of modern warfare and the inherent pacifist tendencies of decision-makers, a vision rooted in the humanism of Immanuel Kant and the search for an international system based upon global justice. In contrast, it was the intellectual heritage of Machiavelli and Hobbes which influenced the new, Realist school. For theorists such as Hans Morgenthau, states were power-maximisers and his view of human nature was extremely low. Thus, his theoretical framework came to be defined by power as the means to acquire national security, which is the central concern of every statesman. In the event of a conflict between national interests and the international system, decision makers will always opt for a course favourable to the former.

Whilst Realism was uncontested during a period when international relations was almost an exclusively US-dominated subject, and when the Cold War dominated the thinking of policy makers throughout the world, the modernisation school emerged as the prevailing paradigm in the nascent development studies. The points of contact between the two are numerous; the centre of gravity of both was in the US, both were ethnocentric, both were concerned with order rather than change, both were concerned primarily with the nation-state and governance, one from an endogenous, the other from an exogenous perspective.

During a similar period when the modernisation paradigm came under attack from the dependency school, the Realist tradition was also under fire. In contrast to the Realist penchant for normative statements, the competing Behaviouralist school was rooted in a positivist tradition and, throughout the 1960s and 1970s, became a credible alternative to Realism, in much the same way as dependency theory mounted its attack on the modernising school with similar success. Furthermore, the style of attack was also similar - both used multi- and cross-disciplinary tools of analysis and the centre of gravity of both were located outside the US. Indeed, dependency theory can be seen to fit well into the dialectical approach to international relations[6].

By far the most important contribution offered by the Behaviouralist approach was its unequivocal rejection of the normative assumptions which underpinned Realism. Nevertheless, too little was either attempted or achieved when it came to usurping the dominance of the Realist paradigm[7]. In effect, it was not until a new form of idealism emerged in the mid-1970s, in the form of liberal transnationalism, that a more credible and conscious alternative to Realism developed. Just as the Idealist tradition stressed the need for peace and the non-violent mediation of conflict, the Transnationalist approach stressed interdependence, integration, cooperation and common interest.

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6 Alker and Biersteker [1984], pp.121-142.

7 Smith [1987], p.196.

During the late-1970s and early-1980s, adverse developments in the international system prompted a new approach in international relations in the form of Neo-Realism, which duly prompted many to ask searching questions as to whether or not the Realist paradigm had ever really been displaced. As détente and the optimism of the Carter era collapsed, Transnationalism and Interdependency theories suddenly appeared woefully inappropriate as tools for understanding the contours of the international system - Iran, Afghanistan and the new Cold War for example. However, if Transnationalism became rapidly conspicuous by its absence in academic circles, it consistently reappeared in various quarters of the international community where it had not previously been institutionalised; the Brandt, Palmé, Brundtland and South Commissions, the European Nuclear Disarmament movement and nuclear freeze campaign, and, even, Band Aid.

The confrontation offered by Neo-Realism turned essentially on the nature of international anarchy. Once again, it seemed, the contemporary history of the international system confirmed that states were power maximisers and that the system as a whole was essentially anarchic. At the same time, however, Neo-Realism appears to eschew the normative foundations of Realism which strongly suggests a process of synthesis between Realism and Behaviouralism. Indeed, the very existence of Neo-Realism is in part due to the internal critique of Interdependence based upon the latter's disregard of national interest[8].

8 Luckham [1988], p.50.

Both the emergence and potency of Neo-Realism has provoked considerable debate and controversy. In part this is because Realism is closely associated with both foreign policy analysis and practice and there is every indication that similar links are emerging in the US, at least between Neo-Realism and the foreign policy community. Certainly, there is an axiomatic truth to this - foreign policy practitioners are more likely to seek advice from, and be influenced by, scholars whose primary concerns centre upon the nation-state and national interest.

In a similar fashion to development studies, much of the contemporary focus in international relations rests upon the role of the discipline in the development of implementing policies and nowhere has this been more stark than in the sub-field of defence studies. On the one hand the past decade has been a period when the use of military power has acquired, up until very recently, a new legitimacy, whether in the cementing of political alliances, outright intervention and power projection or, specifically in the Third World, the maintenance of domestic order.

On the other, it has also been a period when strategists, defence analysts, politicians and voting publics have become sensitised to much that is wrong and contradictory over the way in which states seek security. The most obvious manifestation of this shift was seen in the development of a politically significant anti-nuclear movement which mounted a sustained and often cogent attack on the defence policies of NATO members throughout the early- and mid-1980s. This in turn pressed the media and many politicians to acquire rapidly a better grasp of the issues. The combination was a powerful one and

placed defence issues in general and nuclear issues in particular high on the political agenda of most Western democracies. Equally, strategists and defence analysts were coming to accept that nuclear deterrence in both its simple and complex forms posed almost as many security and political problems as it solved[9].

Against a background of public concern and military-professional confusion as to the efficacy and desirability of nuclear deterrence and active shifts in NATO's nuclear policy and posture, concern centred upon the problem of how to eliminate or reduce substantially the role of nuclear weapons. At the same time, however, most agreed that nuclear disarmament/arms control or minimum deterrence could not be introduced at the expense of national security or compensations in the conventional, non-nuclear domain which would force defence budgets over the threshold of both political and fiscal acceptance. The result has been the development of a politically and intellectually intriguing debate on military futures involving military personnel, strategic thinkers, defence analysts, peace researchers and, to a very limited extent, members of the peace movement. The debate turns upon a widely held conviction that the well recognised 'security dilemma' is rapidly becoming politically untenable. As such there is an urgent need to restructure the defence policies of the two major power blocs which will either eliminate or severely reduce the risk of nuclear war.

Although a consensus exists in favour of alternative defence strategies, there is no agreement as to what constitutes such a

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9 For a brief and cogent explanation of this debate see, Buzan [1987b], Chapter 13.

strategy. Instead, a continuum exists which spans non-violent civilian based resistance at the one end and minimum nuclear deterrence at the other - the two poles could hardly be further apart. Nevertheless, what does exist is the broadly accepted need within both the Realist and the Idealist traditions of a need for synthesis and it is here that the interface between Realism and Transnationalism, namely Neo-Realism, offers the most intellectually fertile ground, whereas both appear somewhat limited when considered alone,

> "... because Realist policies require the arming of the state and a power-struggle analysis of the system, they naturally clash with idealist policies based on disarmament, international co-operation, and a harmony-of-interests model of the system. If that clash is seen as so basic that it precludes a meaningful mix between them, then each alternative must carry alone the whole burden of security. To do this, the Realist policy must exaggerate the necessity for a powerful state, and the idealist one must leap all the way into utopias of general and complete disarmament and world government."[10]

The alternative defence debate has been discussed and outlined elsewhere[11]. Although the impact upon the policy process is minimal as yet, there have been few such occasions which match the potential ability of this debate to shape the policies of states through a double-edged appeal to both national interest and the future well-being of the international community. (A parallel example can be seen in the ongoing movement towards greater environmental protection.)

Nevertheless, a glaring anomaly exists in so far as the alternative defence debate has studiously avoided any mention of the Third World. In part this is due to the ethnocentrism of the international

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10 Buzan [1984]

11 Buzan [1987a]

relations community and their undue concentration upon intra-alliance and East-West defence issues - indeed, the Third World generally comes into focus only in relation to East-West security, witness the level of concern over the Middle East and the base race in the Indian Ocean for example. On the other hand, the rise of neo-liberalism and the traditional failure within the prevailing development paradigm to consider fully both the exogenous aspects of the development process and the defence sector accounts for the lack of interest in the field of development studies.

However, both areas ignore the armament process in the Third World at great cost. Without doubt the 1980s have been of particular significance and importance. Many of the inherent contradictions contained in the transfer of advanced military technology from North to South have finally unfolded for both suppliers and recipients. What seemed a smooth and steady process in the 1970s now seems fraught with political, economic and technical dilemmas. Conceivably, many Third World countries will no longer find it as easy or indeed possible to maintain their defence sectors along traditional lines. At the same time, there is very little to suggest that policy makers have recognised the scale of the contradictions or the extent of the emerging defence dilemma. The central concern therefore, is to construct a regime which is capable of guaranteeing the security of Third World states whilst at the same time reducing the demand for armament. In order to address this complex issue it is necessary to understand what drives the systematic transfer of military technology to the Third World, what changes are occurring and, finally, how the present fluid period can be exploited to institute changes based upon an alternative security regime and the

adoption of radically different defence policies by Third World countries.

2.2 The Arms Trade in the 1980s: An Approaching Crisis

Since the Second World War armament production has become a large and important industrial sector in most of the member countries of the two primary military blocs, NATO and the Warsaw Pact. Politically, for an individual country to maintain the potential for war preparedness is considered by governments well worth the costs which such an activity requires, although judgments about how much the costs are differ markedly[12]. The embodiment of increasingly sophisticated technology in weapons systems has created complex industrial requirements. The size and complexity of defence production spanning the complete cycle of invention, innovation and production involves thousands of managers, bureaucrats, skilled and semi-skilled workers. If such a capability is to be maintained the defence industries must have orders. However, as governments become less able to allocate increasing resources to defence due to poor growth rates, the full utilisation of capacity becomes impossible. These problems are greatly compounded by the increasing cost of weapons systems, a function of increasing sophistication.

As such the export market is a vital element which sustains production and prevents defence expenditure from rising beyond

12 The most pessimistic view of how defence expenditure and production can seriously damage the economy is provided by Mary Kaldor. A more benign view of the economic effects of military expenditure can be found in Kennedy [1975].

acceptable political and fiscal levels. All countries must now consider the export market if national defence production capabilities are to be maintained and high research and development costs offset. Exports bring down unit costs and they also maintain production runs; an optimum production run will be of sufficient duration to satisfy initial domestic demand and then for exports to continue through until a successor system is either ready or affordable. The Third World offers the most lucrative and straightforward export market.

On the demand side arms imports are the result of several interlocking factors. The conventional wisdom which links the demand for arms to the turbulence of intra-Third World relations at the regional level and the slow and uneven progress of political development tells only half the story. The other view which sees demand patterns as the orchestration of Third World leaders by the unscrupulous representatives of government and industry, or as the irresponsible actions of authoritarian leaders, is equally selective.

Many Third World countries do not possess a balanced means of taking and implementing decisions. Decisions taken often seem misguided and unsympathetic to other, pressing national needs particularly those relating to economic development. However, this should not obscure the fact that defence policy is rarely, if ever, an issue that is treated lightly. The demand for military technology differs from country to country and from region to region. As in the North, the policy which defines defence needs is comprised of competing claims to scarce resources and, as such, is pragmatic, the result of domestic political bargaining processes in the context of available

resources and foreign policy, of which threat perceptions are a subset.

In reality, within Third World countries there exists an armament process, significantly different from those within the advanced producer countries but present nevertheless. Thus, decisions on the how, why and wherefore of armament procurement can be explained to varying degrees by a mix of perceptions of external threat, differing professional responses to how threats should be countered or diminished and what military technology can be acquired from either external or indigenous sources. Certainly, whilst all these factors are present, their salience will differ according to the size, geo-political position, stage of political development, influence of the military, economic capacity and external perception.

The arms trade, the most useful starting point for an analysis of the Third World armament process, can be understood as a subsystem of the international system which has prevailed since the end of the Second World War. The system exists on two axes; North and South, East and West. The transfer and sale of armaments from North to South has performed several functions for both suppliers and recipients. Third World countries exploited the Cold War to amass the maximum defence capability in the minimum time and at the lowest price. Arms transfers also permitted Third World countries to confront regional problems, to defend themselves against irredentist claims, insurgencies, great power interventions and, above all, to consolidate and protect sovereign rights. However, the economic and political conditions which facilitated the rapid accumulation of armament in the Third World no longer obtains. Already these changes

are being reflected in the statistics on military expenditure in and arms sales to the Third World[13]. In effect, the systemic transfer of military technology from North to South is currently approaching a crisis due to several factors.

All major arms producers face pressures to export. At certain times the pressure to export is more intense, particularly for the major industrial exporters such as France, Britain and West Germany. Periodically, defence expenditures in the West European countries enter into a period of structural crisis. This is due to combinations of poor overall economic performance, military inflation, higher inelastic costs (fuel and forces pay), and the prevailing procurement culture. As a result the pressures upon defence budgets rise and opportunity costs become more difficult to endure. Arms exports are a means of both alleviating many of the costs associated with military inflation and cushioning the effects of falling domestic demand.

Britain provides an excellent example of this trend. Defence expenditure since 1979 has increased by about 20% in real terms. Even though the Conservative Government is more committed than its predecessors to increase Britain's defence capability, partly in relation to its own perceptions of foreign policy and partly in response to pressure from the United States, because of poor economic performance the upward rise has been halted and slightly reversed[14]. As a result, immediate pressure is placed upon those industries which

13 These developments have been studied and discussed by the SIPRI arms trade and military expenditure team whose reports are to be found in the SIPRI Yearbooks, 1986 in particular.

14 Statement on the Defence Estimates [1986].

benefitted most from the previous increases, in this instance the weapons (as opposed to platforms) manufacturers and the electronics industry. Funding gaps grow larger and programmes are deferred. As the real value of defence resources decreases the services are faced with the prospect of being cut back.

In early 1986, the British government secured a defence deal with Saudi Arabia for the sale of 72 Tornado Multi-Role Combat Aircraft valued at £5 billion over the first three years together with firm indications that an extension will cover a further two years for an additional £2 billion at least. In addition, smaller deals for the Tornado have also been struck with Malyasia and Jordan. The effects of such a large deal for the RAF are far reaching. Coupled with the MoD's good housekeeping measures the deal will afford defence planners a greater degree of flexibility in the 1990s.[15]

If Britain is to maintain its overall defence capacity into the future the Government must look for similar ways of offsetting the mounting pressures on the defence budget. One proposal is to amortize a major proportion of the MoD's defence expenditure through increased exports. This would require exports to run at least three times higher than the average annual level of £2,500 million per annum (export profit margins are about 20% over the direct cost of production)[16]. Britain, other relatively small industrial suppliers and even the United States may move in this direction over the next decade. In the US the combination of increased defence expenditure and mounting federal deficits places defence in the front line when

15 Defence Industry Review [1986], p.6-7.

16 Defence Industry Review [1986], p.18.

the need to reduce the federal deficit becomes as serious as it is at present. However, the emphasis of the Reagan Administration was on increasing equipment procurement and investment, precisely the areas of the defence budget where cost projections are traditionally very poor which makes these budget heads very inaccurate[17]. This form of inflation coupled with the regional and national implications of cancelling whole programmes will create enormous pressure on the defence sector which, according to the General Accounting Office, may be underfunded by 31% in some areas. One option which Congress may contemplate is to sacrifice readiness programmes to protect equipment procurement[18]. Another option could be to increase arms sales, thus having the effect of transforming the United States once and for all into an industrial supplier.

The problem faced by the major arms suppliers is that the market for arms in the Third World does not exist as it did in the 1970s. During the 1970s the increasing need on the part of all major arms suppliers to export arms coincided with the economic conditions which prevailed in the Third World. In 1973 oil prices rose by 400%, and doubled again in 1978-79. This rapid accumulation of wealth by the OPEC countries opened up a massive arms market for arms exporters in both East and West. Other Third World countries financed their arms imports through drawing on reserves or through a positive net flow of capital on their balance of payments. Thus, directly or indirectly, these arms imports were financed through borrowings from official

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17 Quoting from Congressional reports and Congressional Budget office reports Seymour Deitchman has estimated that the average growth of military system costs over initial estimates range between 50 and 80 per cent, Deitchman [1983], p.219.

18 Clark [1985], p.39.

bilateral and multilateral sources and the international capital market[19]. Furthermore, during this period the major arms importers found it necessary to modernise equipment generally considered to be obsolete. One reason why arms imports in South Asia rose throughout the early-1980s whilst elsewhere they declined is because the modernisation programmes in India and Pakistan started much later. In Pakistan this was due to the drawn out negotiations with the United States over the size of the military and economic aid agreement. In India, the interruptions caused by the Emergency, the subsequent short period of office of the Janata party and shortages of foreign exchange prevented a full scale modernisation programme until 1980, when Indira Gandhi was re-elected.

In recent years many Third World countries have found themselves less able than ever before to afford to import arms, which are themselves becoming more expensive. Declining terms of trade, debt crises, the reduction of oil prices and the global recession have severely reduced arms markets. Also, during a period when many modernisation programmes are well advanced, there is more potential for adjustment. Moreover, some of the stronger developing countries, such as Brazil, have become producers themselves and with relatively low levels of domestic demand they are now aggressive exporters free of the restrictions imposed on many of the traditional suppliers. As a result, arms sales to the Third World are declining, and Western European countries are either buying indigenous products or products from the consortiums in which they are involved. At the 1986 Farnborough Air Show, the biggest military aircraft showcase, the US

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19 Kitchenman [1983], p.8.

aerospace firm Grumman decided not to put in an appearance, and other US companies declined the option to display[20].

Third World countries have been prevented from raising or maintaining military expenditure because of pressing economic problems: there is no intention to practice armament limitation and control. Looking ahead to the future suggests that the current period of restraint may not last through until the end of the century. The debt crisis is unlikely to afford many options for many Third World countries. Declining export revenues and continued uncertainty and disagreement amongst OPEC countries might also reduce defence and security options. However, over the next decade, defence decision makers will begin to request follow-on systems to replace those currently in use. Wars in the Third World will be followed by reequipment programmes. Inelastic costs, such as those for maintenance, repair and spare parts will increase. The current trend towards force multipliers, such as AWACS, will involve very high extra costs. Head and shoulders above other claims, the military will continue to argue that national security considerations are paramount; the lessons of history suggest that they will succeed.

2.3 Military Technology - An Ally of Arms Control?

The prospects for arms limitation and control in the Third World seem remote. However, there are changes occurring in a different dimension which suggest that a more positive preferred defence and security system for the Third World is becoming more feasible. Arms

20 Bedard [1986].

control in the Third World has yet to be seen to be in the interests of Third World governments. However, an alternative security system based upon alternative defence strategies may come to be seen as one route out of the increasingly contradictory armament process.

The rising cost of weapons systems coupled with the declining economic conditions have created a crisis for the systematic transfer of military technology from North to South. In addition, it is also becoming evident that the characteristics of advanced military technology are becoming less appropriate for Third World countries. On the one hand, there is some evidence that the armed forces of Third World countries are experiencing problems in their ability to exploit the technology upon which they rely so much. On the other, whether or not advanced military technology will function efficiently in both time of conflict, and in the often extreme geographic conditions which prevail in the Third World, is becoming an increasingly relevant question on the basis of a growing body of evidence on the shortcomings and limitations of advanced military technology.

The realization of the capabilities of a weapons system depends not just upon its import and deployment. It also requires the adoption by a military establishment and, further, its assimilation into tactics, doctrine and organisation[21]. The act of import/procurement suggests that a weapon system has been adopted by the military establishment, although this might not always be the case[22].' In

21 Dupoy [1984], p.301.

22 In India there is a great deal of support of the development of nuclear weapons. But the armed forces are not in favour of taking the nuclear option as they realise that it will reduce their power of decision taking during time of crisis.

developed countries there is a continuing tension between the invention and the adoption of weapons and a rich array of evidence which documents the lag between what industry can produce and what the military is prepared to accept and assimilate. For example, for many years the cruise missile was an institutional orphan within the United States; it took time before the revolution in military technology, which the cruise missile embodied, took root in the minds of the military which then opened the way for a full discussion and consideration of its capability[23]. For Third World countries, the problem manifests itself in a different way. In 1965 the Pakistan tank crews were unable to operate the automatic fire controls on their Patton tanks which indicates graphically the adverse effects of importing and deploying sophisticated technology whilst neglecting or being unable to cope with aspects of training[24]. Lack of centralised command coupled with inherent confusion (fog of war) prevented a full application and exploitation of the Argentine Exocet option during the Falklands/Malvinas conflict[25]. In 1981 Iran had the ability to use tanks, artillery, air defence and close-support aircraft in concert to mount offensive and potentially decisive operations against Iraq. However, due primarily to the internal, domestic chaos of the time, in particular Khomeini's brutal purge of the officer corps in 1980, Iran's offensive potential dissolved in a sea of logistical chaos resulting in the permanent loss of the requisite organisational framework[26].

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23 Builder [1985], p.4

24 Albrecht and Kaldor [1979], p.8.

25 Ullman [1985], p.250.

26 Stuadenmaier [1985], p. 214, 224.

Much more suspect than the ability of Third World militaries to assimilate advanced military technology is the ability of the technology itself to survive in difficult conditions. Unfortunately, the successes and failures of military technology in the Third World are somewhat difficult to assess. Military success in conventional war tends to be explained by superior military technology coupled to effective organisation and high morale. Failures are more often than not explained by poor tactics, misuse of resources, chaos and military incompetence. In some respects these views are valid. Wars in the Third World often do take place during periods of political crisis and national disaffection, which inevitably ramifies into civil-military command problems and logistical shortcomings. Equally, the Third World invariably provides the theatre in which modern military technology is subjected to its only relevant test, that of performance under real rather than simulated conditions. Thus, the Yom Kippur war in the Middle East was seen as a triumph for Syrian and Egyptian air defences and anti-tank weapons. The potency and potential of precision guided munitions were once again confirmed during the Falklands/Malvinas conflict when the Exocet became a 'combat proven' system. Israel's efficient destruction of Syrian air defences based in the Bekaa valley in 1982 was closely analysed primarily for the military lessons contained therein. However, the tendency is for defence analysts to look closely at Third World conflicts for signs of technological success but explain away failures in terms of human error.

The same cannot be said of the debate in the West where there is considerable concern over the implications of the deployment of

complex weapons systems which are becoming increasingly inefficient, particularly in the United States. America's multi-option defence posture, its global role and enormous defence budget have maintained that country's position at the cutting edge of advanced military technology. The US perception of military strength is the unshakable belief in the formula of organisation, morale and superior technology, all of which are given a forward momentum through an ideology of manifest destiny. Yet, this formula is being seriously compromised by an unforeseen and contradictory trajectory. As weapons systems become more complex, they are also becoming less robust and more prone to failure. In addition, unit costs are escalating, as are the logistical problems in relation to service, repair and maintenance. Some of the more advanced systems bought by the US armed forces such as the M-1 tank, the cancelled Sergeant York/Divad anti-aircraft gun, the Copperhead 'smart' missile and the Maverick air-to-ground missile have proved to be either operationally flawed or only barely fit for service during peace. In time of conflict, or when subject to adverse weather conditions, many advanced weapons systems may be serviceable for only a fraction of the time intended. Fractures in an ever increasing logistical chain involving disruptions to spare parts and maintenance facilities will render virtually useless large parts of NATO and American conventional defence capability.[27]

In addition to the 'reformist' movement and the media, there are dissenting voices from within the American defence community. Franklin Spinney, a Pentagon systems analyst, has noted that whilst many of the technical failures can be ironed out with sufficient

27 Rasor [1983].

investment of resources and expertise, the root problem is a conceptual failure. The pursuit of technological complexity has become confused with capability and the former is more a cost than a benefit,

> "Increasing complexity increases the number of parts, thereby decreasing the ability of an individual to comprehend the whole. Increasing complexity is a cost, because it decreases the ability to understand and consequently makes it more difficult to adjust to, or shape, internal and external change. Put another way, increasing complexity increases rigidity in a game in which flexibility is a paramount virtue".[28]

Whilst Spinney argues that increased complexity at the sharp end of defence capability does little to improve overall defence efforts, he also raises concern over the secondary effects. Operating and support costs are difficult to determine once the opportunity costs vis à vis other areas of the defence budget increase. Reductions in training and supplies and maintenance short cuts have eroded capability and weakened morale. Furthermore, increasing complexity requires a commensurate rise in skills for operation and repair and entail costs which the military paymasters are viewing with concern[29].

What are the implications for Third World countries which are wedded to this particular technique of force? At the conceptual level, and with few exceptions, the armed forces of the Third World have adopted completely the Western model of defence; technology embodied in weapons systems to afford firepower, mobility and protection and facilitated by an organisational structure utilising techniques of

28 Spinney [1985], p.6.

29 Spinney [1985], p.39.

command, control and communication to ensure the optimum use of the technology available. However, it is difficult to estimate to what extent Third World countries have absorbed the problems and contradictions inherent in Western defence capabilities. For political, strategic and morale reasons, few of the major exporters are willing to export state-of-the-art technology, although there are several examples where this has happened, witness the sale of the MIG-29 to India, or the Tornado MRCA and AWACS to Saudi Arabia, or the F-16 to Thailand and Pakistan. Furthermore, although many developing countries may want this type of technology, they must first be able to pay for it; China rejected the Harrier VSTOL on the basis of cost, not capability. Eventually, however, most advanced weapons systems released onto the export market, both good and bad, appear to find their way into Third World inventories. For example, during the 1970s India had agreed to procure the Jaguar Deep Strike Penetration Aircraft to be replaced in the 1980s by the Mirage 2000. Foreign exchange shortages during the 1970s prevented the immediate procurement of the Jaguar. As and when political and economic conditions permitted in the 1980s, India procured and deployed both the Jaguar and the Mirage simultaneously.

The mounting evidence regarding the adverse cost and utility of advanced military technology for Third World countries is a persuasive argument for radical changes in defence policy and the adoption of alternative defence policies. However, when seen through the eyes of those who define defence and security needs, the perspective is very different. For professional bodies noted for their conservatism, advanced military technology has much in its favour. World War II was an overwhelming victory for superior

technology deployed on a wide scale. There is no complete defence against nuclear war. As and when structural problems occur, it is often less complicated to argue that increased resources will suffice. After all, 'throwing money' at problems is a failure in government departments other than defence. Indeed, considering the blinkered approach towards product improvement, is it fair to expect anything more than improvement through a constant process of 'debugging'?

Moreover, alternative defence policies spanning the continuum from the present policy debate in Western Europe through to the more time-honoured approach to territorial defence and non-violent civil resistance have been neither tried nor tested at the state level. Also, many of these policies are essentially strategies for coping with defeat and the political cost of implementation would be massive[30]. Nevertheless, a situation is evolving whereby the tenacious retention of the status quo is no longer appropriate and may be impossible. Alternative defence policies will not appear overnight and, in the present environment, few analysts would advocate their adoption but, at the conceptual level, alternative defence does offer the basis for the design of implementing policies.

Already, it is possible to detect pockets of concern and innovative thinking along the lines of alternative defence for Third World countries, but primarily in quarters with no apparent axe to grind in the arms limitation/disarmament or the development debates. Technical/professional journals, defence analysts and the military are occasionally given to measured critiques of the prevailing

30 Clark [1985], p.9.

philosophy of defence[31]. As economic conditions continue to afford fewer choices more questions will be asked. However, the debate must go beyond defence alone in order to add credibility and imagination to an alternative security regime.

The maintenance of the status quo would be wrong. We have already seen the horrific consequences of chemical weapons in the Gulf War - such scenes could become more widespread if more states opt for the deployment of the 'poor man's deterrent' in the face of growing cost and operational problems at the conventional level. Despite a growing body of empirical evidence which testifies to the relationship between armament and underdevelopment, this has not effected a move towards arms limitation in the Third World. If the current system is not replaced by adequate alternatives history may well repeat itself with dire consequences, and not just for the Third World. Finally, this type of armament limitation in the Third World could influence significantly the situation in the rest of the world. Arms sales, it can be argued, have avoided the inevitable confrontation with structural crises in the defence sectors. By radically changing patterns of demand, the crisis would no longer be avoidable.

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31 For example, Vlahos [1985], pp 39-42, 62.

CHAPTER THREE

INDIA: REGIONAL SECURITY FROM THE ARYAN TIMES TO THE PRESENT

3.1 External Events: Their Importance and Relevance

> "The trouble with the seamless web is that its logic pushes towards hopelessly complicated holistic perspectives. If the security of each is related to the security of all, then nothing can be understood without understanding everything. The reality of security interdependence is unavoidable."[1]

In all too many respects a comprehensive survey of India's security threats, perceived or otherwise, is beyond the scope of this chapter. The disaggregation of security perspectives is a very complex process covering domestic/national, regional and international issues and, equally important, their inter-relationships. To a limited extent, it has been attempted several times before: assessments of the regional security environment in the Indian sub-continent and the impact of events and issues, such as the 1962 war between India and China, the 1971 Indo-Pakistan war and the nuclear aspirations of the two major regional powers, have occupied the minds of many academics and policy makers since the sub-continent first became a major area of geo-political importance[2].

It would not, therefore, be either original or useful to attempt a similar appraisal. Excellent studies have already been made and the

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1 Buzan & Rizvi [1986], p.5.

2 See, for example, Thomas [1978, 1987]; Subramanyam [1982]; Maxwell [1970]; Gupta [1966]; Buzan & Rizvi [1986].

results published. This study is concerned to a degree with India's external security environment but for a different reason. It is primarily concerned with the myriad domestic, internal conditions which have influenced the way in which India has developed its own particular defence postures, the various pressures at work when decisions pertaining to defence are made and the way in which these factors can aid our understanding of how and why India has emerged with a particular set of defence postures over the past forty years.

However, the external environment cannot be ignored, even if it is considered to be of less central importance in this study than in others. The foreign and defence policies of neighbouring states, wars of all kinds and economic and political developments beyond territorial boundaries do affect the way in which public opinion and decision makers view and condone the need for defence. Even though external factors do not define exclusively the size of military budgets or choice of technology, for example, they may influence and legitimise the way in which decisions are taken and the form which these decisions may take.

Traditionally, the level of analysis has concentrated primarily upon external threats and the reactions of the state to those threats. This has made India, the nation state, the primary unit of analysis. However, glaringly absent from previous attempts to explain India's foreign relations is any form of discussion or understanding of the relationship between foreign and defence policies, the roots of defence policy and the effect that decisions about defence may have upon regional security.

The exclusion of domestic, bureaucratic and, indeed, technological angles in understanding defence conflicts with a widely accepted body of research on the formulation of defence and foreign policies of the major powers, the United States in particular[3]. Put simply, regional and international studies tend to ignore the well-established fact that defence policy is just as much a product of bureaucratic bargaining and compromise as other areas of public policy, such as health and education. The key difference, of course, between mature democracies, such as the US, and Third World countries, is the relative difference in the level of compromise. Nevertheless, this should not obviate the degree of bargaining which takes place when defence decisions are on the agenda.

The intention of this study is to promote a keener analysis of domestic factors in the broader understanding of events in India and South Asia in particular and the Third World in general. In this instance the domestic perspective is deemed to be of greatest importance. However, it does not follow that the regional or international environments are at all irrelevant but it is necessary to place these factors in their correct place. All states react to important events which take place outside their borders. However, it is the way in which the perspectives of decision makers are framed and, subsequently, how policies are shaped and implemented which combine to provide the basis for foreign and defence policy.

Analytic and empirical detail are of necessity casualties in this chapter. The intention here is to develop a perspective on India's

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3 For a review of this literature see Curnow [1976] and Graham, M. [1981].

external security environment which will provide a useful backdrop to the discussion and analysis of the domestic, supply or 'push' factors which have such a strong if not definitive influence upon the way in which India conducts its territorial defence. A major justification for sacrificing detail relates to the tendency for most regional security assessments to present a complex environment in a two-dimensional, static fashion. Thus, India's security environment, in the conventional view, changes according to which concentric circle - regional or global - is under consideration at any given point; for example, which major maritime powers patrol the Indian Ocean, the political and economic health of Pakistan and the size of its military aid agreement with the United States, India's own foreign exchange reserves and, even, the weather in Western India and in Jammu and Kashmir. Unable in this study to take each and every security consideration into account and unwilling to compromise with an inadequate 'snapshot', one is left with the option of a broad brush. Thus, the presentation of India's security environment here will be schematic. It is an attempt to capture many of the essential aspects and some of the inter-relationships between domestic, regional and international levels of security.

3.2 From the Aryans to the British: The Legacy of Invasion

Security concerns in the Indian sub-continent have been significantly influenced by a long history of waves of immigration and invasions which stretch back over some four thousand years. Throughout this period northern India in particular was subjected to successive

incursions by waring tribes and invasion attempts from the north-west. Some were successful, others were not.

First and foremost, there was a period of successful colonisation by the Aryan tribes dating from c.1500 BC. The Aryan influence was important. Not only did it exert a strong influence upon Indian culture and the religious life of the native population but it also conflicted, both socially and politically, with the indigenous Dravidian culture. This encounter may have been an initial catalyst for the unique Indian system of caste. In addition, it may have laid the cultural foundations for a divide between north and south by pushing the Dravidians to the South.

Following the Aryans came the Greeks, the Scythians, the Parthians and the Huns. All attempted to establish their rule over areas of northern India but none succeeded for very long. By the middle of the tenth century (AD) the Muslims had arrived, also from the north-west and were more successful than their predecessors over a protracted period of time. The influence of the Mughuls, after they established their empire in India, was immense and as important and enduring as that of the Aryans. The Mughuls were followed by French, Portuguese and British trading companies which appeared in several areas, notably Pondicherry, Calcutta and Goa, but arrived from many directions. Eventually, the sub-continent fell to British colonialism and was transformed into the Indian Empire.

Several thousand years of foreign domination and invasion had a considerable impact on Indian civilisation, particularly in the North and later in the South as well. However, the effects are various and

far from easy to assess. On the one hand, the extent and duration of foreign domination, specifically in the north, has honed perceptions on threat and the ability to calibrate insecurity. On the other, Hinduism and, consequently, India has proved adept at absorbing and assimilating foreign influence which both minimises conflict and gives the society the ability to retain the key aspects of religion and culture.

Hinduism, a term which has come into common usage during the last one hundred years, is unique amongst religions of the world due to its degree of catholicity and capability for assimilation[4]. Thus, invasions of India, and, obversely, Hindu 'colonisation' in South East Asia, were rendered much less traumatic by a very advanced degree of cultural elasticity, particularly on the part of Brahmins, the religious caste which traditionally assumed responsibility for legal, religious and cultural aspects of Hinduism.

During the period of the Muslim rule in India, there was a clear divergence of security perspectives between the Muslim rulers and the Hindu subjects. The former perceived threats to their empire from the North-West as well as from the Hindu rajas within the sub-continent. The latter perceived a threat to their way of life from the aliens who kept arriving from the North-West. It is only with the coming of the Europeans that both became aware of the threat from the sea.

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4 The author is grateful to his former colleagues at the Centre for the Study of Developing Societies in Delhi, particularly Giri Deshingkar, for detailed discussions concerning the nature of Hinduism.

For racial, cultural and economic reasons the Hindu/Indian reaction to the British was more fractious. Initially, the British were welcomed and the indigenous population was grateful for the establishment of law and order. Within the social grid the British were treated as a kind of Kshatriyas. Also, the first British to reach India were much more accommodating and less racially conscious than were successive generations. So, during the early phase of colonisation both parties were capable of a form of integration. At one time it was not uncommon for the angrez to marry local women, wear traditional Indian dress and even worship Hindu deities which signified a near complete break with European culture. This was later reversed as the sea route was shortened by the opening of the Suez canal and an increasing number of European women came to settle in India.

In the nineteenth and early twentieth centuries the permanent presence of the British in India completely altered the security configuration in the Indian sub-continent. India had been made into the British Indian Empire and Indian leaders and opinion shapers were no longer concerned about external security decisions. All decisions concerning security from invasion were taken in London or by the British Viceroy in Delhi. Policy implementation was the task of both the military and civilian British bureaucrats in the sub-continent. Consequently, throughout modern history and up until 1947, the development of Indian political culture was such that external issues and security considerations had little influence upon the emerging nationalist ideology. The British presence in India reinforced this tendency in another way. The collective political mind of India concentrated itself upon the British and independence, particularly

during and after the Hindu and Muslim intellectual revivals of the nineteenth century which culminated in the creation of the Indian National Congress (INC) in 1895[5]. Also, in one sense, the presence of the British in India reduced if not eliminated the importance of communal tensions in the sub-continent - to the British all Indians were 'native' subjects.

The lack of attention devoted to events and trends outside the Indian sub-continent was an oversight on the part of the Indian nationalists; the geographic involvement of the Indian subcontinent in an emerging international system had come about almost a century earlier due to the Treaty of Tilsit in 1807. This treaty represented an attempt by Napoleon Bonaparte to eliminate Russia from the European balance of power. In order to consolidate and preserve the Napoleonic empire, Bonaparte had to isolate Britain which could be done most effectively by diverting Russia away from both events in Europe and a possible alliance with Britain. Consequently, Napoleon persuaded Tsar Alexander I to accept the illusion that he could become Emperor of the East providing France did not interfere. In return Alexander would allow Napoleon to consolidate his empire in the West.

The direct importance of the Treaty of Tilsit for the Indian sub-continent was negligible. However, it was not without significance for two reasons. First, although Britain was able to check Alexander's expansion East towards Persia and the sub-continent, the geo-political importance of Russia for India became an established fact. Second, for the first time, the sub-continent became enmeshed

5 Calvocoressi [1977], p.239.

in a wider geopolitical framework. Hitherto, India had been a largely imperial prize by virtue of its size, raw materials, indigenous products and enviable markets. Essentially, the Indian sub-continent was an end in itself. The rise of Russia and its role in the European balance of power, coupled with its geographic position and potential for expansion to the east and the south, implicated India in international political developments beyond South Asia. Quite suddenly, far flung countries such as India took on a strategic significance in relation to the major European powers, primarily due to the emergence of Russia. By the initial decades of the twentieth century the Indian intelligentsia had started to respond to geopolitical developments. External issues were far less subtle than before and the interpreters within the Indian National Congress (INC) more receptive than their predecessors.

During the First World War Indian troops contributed to the British effort on the Western Front. The cost was considerable, 62,056 Indian troops were killed during the war; less than a thousand were officers[6]. The educated officers, at least, had some sense of why the British Empire was at war with Germany and the role of India therein, the jawans would have had little idea as to why and against whom they were fighting. At the same time, the British rulers realised the importance of running the Indian Empire with the consent of their Indian subjects. India had little choice as to whether or not it became involved in the war though its contribution earned for India a promise of swaraj, or 'home rule', over the course of the conflict. However, it is a moot point as to whether or not this was

6 Statistics of the Military Effort of the British Empire During the Great War, [1922].

intended as a reward and compensation or as an inducement for further, increased contributions to the vast resources of manpower needed to fight the war.

Despite attempts at prevarication, the British Government published the Montagu-Chelmsford report in 1918 which wasintended to establish the principle of self-government for India and hasten the Indianisation of the Indian Army. However, the recognition on the part of the British Government that 'home rule' was inevitable was offset by an marked ambivalence over the question of, and the undeniable ramifications for, the future of the British Empire. In the meantime, sentiments for complete independence were growing in India with each passing year. By 1935, Britain was ready to pass the Government of India Act which gave a great deal of domestic autonomy to India but retained defence matters in British hands.

The outbreak of the Second World War sharpened nationalist sentiments amongst the INC. Even so, once again the incumbent Viceroy involved India in a war without prior consultation with Indian Ministers, who on this occasion promptly resigned. In the event, the resentment of the Indian élites made little overall difference to the British, partly because economic conditions in India had deteriorated during the 1930s. Despite rising nationalist sentiments, recruitment for the Allied war effort was successful. Nationalist sentiments had grown stronger and concerted at the local/regional levels but the linkages were relatively weak. It was Mahatma Gandhi who subsequently strengthened these links and due to him swaraj became a nationalist strategy. Although the Quit India Movement of 1942 was suppressed, the question of independence for India could no longer be

avoided. Over the course of the war the INC secured a firmer grip on the political situation within India and managed to channel nationalist sentiment into the Quit India Movement, which grew in numbers and appeal. Britain, fighting a two-front war against Germany in Europe and Japan in Asia, and that too with a large number of Indian troops, was particularly vulnerable at that time within India.

The end of the war and the election of a Labour Government in Britain in 1945 lent new impetus to the British commitment to independence for India. The Attlee Government sent three cabinet ministers to India to iron out the growing differences between Britain and the two major political groupings in India; the Muslim League, which had developed the notion of an independent state for Muslims to be called Pakistan, and the INC. However, the mission proved to be impossible. Over the course of the war relations between the INC and the Muslim League had deteriorated markedly. Britain's attempts at arbitration were negated by the Muslim leader Jinnah's conviction that Britain was partial to the INC. By 1946 Jinnah had inaugurated a programme of direct action to establish a separate, sovereign state for Indian Muslims. Communal violence in late-1946 forced Viceroy Wavell to recommend that his Government either maintain power for a further decade, or transfer it piecemeal to the provinces.

In the event the British Government did neither. Instead, Attlee retired the incumbent Viceroy and gave Louis Mountbatten the onerous task of partitioning India and granting independence in the form of two sovereign states in the Indian sub-continent. The projected date for independence was June 1948. However, it quickly became clear to

Mountbatten that, given his assessment of the severity of communal violence, the time span involved was too long. The British Government duly brought forward the date to August 1947.

That Mountbatten could effect a transfer of power in such a short time was a remarkable political achievement. However, in the time available, administrative shortcuts were inevitable. Given that the British government was in effect creating two new nation states, the territorial issue was paramount, sensitive and divisive. A representative boundary commission was formed and chaired by Sir Cyril Radcliffe. However, the equal balance of Muslim and Hindu votes from among the representatives of the two communities meant that Radcliffe was frequently left with a casting vote and often took decisions on the basis of insufficient information and, sometimes, outright ignorance. Of particular importance for the future was the commission's indecisiveness over the northern state of Kashmir. At the time of partition Kashmir had a Hindu ruler but the state was predominantly Muslim. The Maharaja could not decide in which direction to move and, as a result, the Radcliffe Plan excluded Kashmir.

3.3 The First Round - The Indo-Pakistan War of 1947

The two-way diaspora which occurred around the time of independence of both India and Pakistan bred confusion, insecurity and atrocious bloodshed. The process of partition resulted in the death of two million people. The violence of partition compounded the existing atmosphere of mistrust, and additional resentment in Pakistan grew

over India's de facto control of the valley of Kashmir. In October 1947 tribesmen from Pakistan invaded Kashmir with a view to 'liberating' the Muslims of Kashmir from the the Hindu Maharaja. When the raiders reached the valley of Kashmir the Maharaja appealed to New Delhi for help but the Indian Government refused to commit troops until he ended his procrastination and formally acceded to India. The Maharaja's subsequent period of deliberation and New Delhi's inaction permitted the tribesmen to move right up to the capital of Kashmir, Srinagar. By the time the Indian Government felt able to commit troops, Srinagar was already occupied. The Government had to organise a major airlift of troops, first to capture Srinagar airport and, subsequently, some portions of the valley.

In early 1948 Nehru referred the Kashmir issue to the United Nations Security Council. Before a ceasefire could be agreed, on 1 January 1949, Pakistan had committed army units to Kashmir with sufficient success to occupy a significant proportion of the state in the west, Azad Kashmir, a position from which it has never retreated.

The first Indo-Pakistan war, often referred to as the 'First Round', was a direct result of partition. Since that time relations between India and Pakistan over Kashmir have been acrimonious and embittered. One, short-lived, exception was the agreement arrived at in the wake of Pakistan's defeat in the 1971 war reached between Mrs Gandhi and Mr Bhutto in 1972 at Simla involving provisional lines of demarcation in Kashmir. Overall, however, Pakistan has never been prepared to surrender the territory annexed in 1947-48 and for its part, India has not fulfilled its promise to honour the UN Security Council recommendation for a plebiscite in Kashmir, which is why Kashmir

remains a disputed territory. Compounding these problems is the fact that the state of Jammu and Kashmir is a strategically important but troublesome state in the Indian union. The State Government has frequently expressed opinions which deviate from the preferred position of the Centre. Thus, political intervention from New Delhi in the state's affairs is routine and no Indian Prime Minister would risk a plebiscite, such is the degree of mutual mistrust.

3.4 Independence, Statehood and Insecurity

The creation of Pakistan affected India in a more profound way than is immediately evident from an historical account of the First Round. The partition of the Indian sub-continent created two nation states and the very existence of the other created for each a national security problem. The war of 1947 merely confirmed what was already known in New Delhi and Islamabad; namely, that there would be near permanent hostility between the two states. For Pakistan, India emerged as a geo-politically dominant power which could not be ignored, although Pakistani perceptions of Indian power and potential are not of direct concern in this instance.

For India, partition had both direct and indirect effects upon Indian perceptions of security. First and foremost, it was the prelude to the dispute over Kashmir, which would always be a difficult circle for India to square. The acceptance of *de facto* borders and a move away from the *status quo ante* would amount to a considerable loss of regional prestige for India, international opinion notwithstanding. In addition, it would constitute a loss of security. Given the

prevailing regional security equation, the loss of Kashmir would increase the size and potential resources of Pakistan and would also alleviate in part Pakistan's primary strategic weakness - a conspicuous lack of defence in depth. Above all, it would cut off India's important supply route to Ladakh, which is important for defence against China.

Less directly, Pakistan posed security problems in other areas. The very act of partition blunted for the Congress Party the political euphoria of independence. Having been traditionally the party in favour of a free, undivided India, partition and the very existence of Pakistan were to an extent symbols of what could not be obtained from Mountbatten. Moreover, it was also the partition of a 'motherland', complete with a particularly strong sense of religious geography[7]. Finally, the existence of Pakistan threw into sharp relief the unresolved debate between the theological/Islamic and the ideological/nationalist-secularist definition of nationhood[8]. In contemporary India this is of more than a passing concern given the discernible political ground which has been gained by Hindu chauvinism in recent years.

3.5 Indian Security Perceptions and the 'Seamless Web' of International Politics

The rapid crystallisation of India's perception of Pakistan took place against the backdrop of an unfolding Cold War between the

7 Bhargava [1983], p.111.

8 Deshingkar [1980].

United States and the Soviet Union. The development of Forward Defence Areas and the policy of containment has already been discussed (see p.11-14). Seen from the narrow, ethnocentric view of international politics held by Cold Warriors in the United States during the late-1940s/early-1950s, an open offer to upgrade the depleted Pakistani defence posture made excellent sense. However, US attempts to encircle the Soviet Union was extremely destabilising in South Asia. It added to existing tensions in the region and the arms race between India and Pakistan.

In May 1954 Pakistan signed an agreement with the United States which opened the way for military aid on the condition that Pakistan accepted co-operation in a regional defence network directed against the Soviet Union. Pakistan's geographic position was of critical importance to the containment strategy. Apart from Pakistan's borders with Afghanistan and its control over the strategically important Hindu Kush mountain ranges, it was also situated favourably, split as it was between East and West Pakistan and between the regions from which the member countries of both SEATO and CENTO were drawn. In September 1955 Pakistan joined CENTO and by the end of the same year it had also joined SEATO. President Eisenhower went to considerable pains to justify to India the wider rationale for the military aid to Pakistan but failed. Nehru and key opinion shapers in New Delhi saw the act as a direct and aggressive move designed to compromise India's foreign policy based upon non-alignment. Conciliatory statements from the American President and a rise in US economic aid to India could not offset the strident remarks from Secretary of State Dulles, who considered the Indian

policy of non-alignment to be 'an immoral conception'[9]. Nor did policy makers in New Delhi ignore the view held by Vice-President Nixon that a defence alliance with Pakistan would provide 'a counter-blast to the confirmed neutralism of Nehru's India'[10].

More to the point, perhaps, totalling as it did over US$1 billion during the period 1954-65, American military aid to Pakistan affected significantly the regional military balance. All three services in Pakistan benefited substantially from the military aid package, particularly the Pakistan Air Force. For example, the Army received 460 M-47 and M-48 Patton battle tanks between 1955 and 1965. The Navy received coastal minesweepers, two 'CH' class destroyers and, of great importance at the time, a Tench class submarine in 1964, albeit on loan. Air Force strength was increased by an approximate order of magnitude with the acquisition of 120 F-86F fighters between 1956 and 1958, 26 Martin B-57B Canberra long-range bombers and later, in 1962, the Lockheed F-104 equipped with Sidewinder air-to-air missiles.[11]

In the period between 1947 and 1965, therefore, the date of the second Indo-Pakistan war, India's security perceptions vis à vis Pakistan were influenced by three factors. First, and with reservations, it has been suggested that the Indian élites may have harboured a cultural sense of insecurity following a long history of invasion from the North West. On the one hand, prior to the arrival of the British, Indian culture had evolved a unique system for assimilating successful 'invasions'. On the other, the period under

9 SIPRI [1971], p.493.

10 SIPRI [1971], p.493.

11 SIPRI [1971], p.836-7.

British rule and subsequent independence moulded India into something approximating a nation state which superceded this well-tried cultural mechanism and created instead the problem of 'national security'.

Second, a sense of insecurity arose from the very creation of Pakistan. Henceforth, the security configuration in the sub-continent was conditioned by the existence of two nation states whose very creation and existence stemmed from religious antipathy, the 'two nations theory', and profound mistrust. The act of independence created India and Pakistan as nation states which, in the prevailing atmosphere of mistrust, raised pertinent questions with regard to territorial integrity, national security and sovereignty. In short, the creation of Pakistan in turn created for India not just a security problem but also a security dilemma; it could not live easily with such a neighbour nor could it eliminate or absorb Pakistan. Finally, partition was neither a complete nor a compulsory process and a large number of Muslims, which now total 80 million, remained in India. Indian leaders habitually assumed that the primary allegiance of the Muslim minority was towards Pakistan; they thus constituted an internal threat and a potential fifth column.

Third, the military alliance between Pakistan and the United States, however cosmetic, mutually opportunist and, for the United States, intended primarily to deter the expansionist aims of the Soviet Union, pushed India's security problems into another dimension. Henceforth, any attempts to steer clear of, or rise above, the ebb and flow of Cold War politics was impossible for India. Conflict and war between India and Pakistan would be more than a regional issue;

India was now unwittingly integrated into the 'seamless web' of international politics. Also, the military aid relationship between Pakistan and China after the 1962 war pushed India indirectly into the proximity of the major dispute between the Soviet Union and China.

3.6 Territorial Integrity and the Threat from the North-West

Having mapped out the historical development of India's external security environment vis à vis Pakistan, it is now appropriate to measure more precisely where the points of actual insecurity currently lie. A basic rationale for India's security problem is concerned with the possibility of future conflict along the Indo-Pakistan border, which is approximately 1,100 miles in length, although the Sino-Indian border dilemma is sometimes used instead. The Indo-Pakistan border can be divided into five distinct theatres; the Siachin Glacier, Jammu & Kashmir, the Punjab, the Rajasthan desert and the Rann of Kutch.

The loss of the strategically important area within Jammu and Kashmir comprised about one-third of the state to the north. Within this disputed area, the central focus is the small town of Gilgit. The 1949 Karachi Agreement which brought active hostilities to an end, and the later Simla Agreement (1972), delineated a cease-fire line, now referred to as the Line of Control, which terminated just north of the town of Thang. The status of the area to the north was not delineated. This is due to the enormous problems which military operations north of Thang have always posed to both sides. Apart

from the logistical problems of moving food, fuel and equipment in mountainous regions as high as 20,000 feet, temperatures during the winter can drop to -40° Centigrade. At the time of partition the demarcation of such a desolate border made little sense, military technology had not developed sufficiently to warrant the boundary commission's close consideration of the area. (Military operations only began during the early-1980s when the relevant equipment became available.)

After 1948 the region attracted little attention from either side. In recent years, however, the situation has changed. The area north of Thang contains the Karakoram mountain range. Here, there are some visually spectacular peaks which appeal to tourists and also pose enormous challenges to mountaineers constantly in search of new peaks and approaches. Pakistan has capitalised on this demand and has opened up the area for tourism and mountaineering. Thus, a recent BBC radio travel programme featured an 'adventure holiday' involving a tour along the Karakoram highway[12]. More important since 1974, specialist mountaineering journals have advertised in such a way that the area is regarded as within Pakistan. Moreover, respected atlases such as the Times Atlas and the Readers Digest Atlas have started to show the line of control extending to the Karakoram Pass which is significantly to the north of the hitherto accepted most northern point - NJ 9842.[13]

In effect this amounts to a de facto gain of approximately 3,000 square kilometres for Pakistan. Furthermore, there are also

12 Breakaway, BBC Radio 4, [14 March, 1987].

13 The Hindu, [22 June 1985].

strategic considerations for both sides. For India, Pakistan's inherent strategic weaknesses, which range from a severely underdeveloped resource base to a chronic lack of defence in depth, can be partially offset by the threat of involving India in a two-front war with China. Acquisition of the Siachin glacier not only places a formidable logistical obstacle behind the Pakistan border but it also increases the common border between Pakistan and China. In the words of an Indian general,

> "The strategic Tibet-Sinkiang road passes through territory captured by China east of Siachin [in 1962]. Northwards we have a new road from Pakistan going through the Khunjerab Pass. These form a noose [a]round India's jugular. If they took Siachin, they would be holding a dagger to our backs in the Nubra Valley."[14]

A simple, non-military explanation for these developments is that Pakistan has seen in the Siachin glacier an opportunity for earning valuable foreign exchange from tourism, just as Nepal has done in recent years with its trekking and 'white water sport' holidays. After all, Pakistan is not at present and probably never will be a tourist haven in the traditional sense. It is natural for the state to maximise its comparative advantage in other areas.

Without doubt, the foreign exchange benefits from tourism are almost certain to be secondary to security considerations. Even so, the advantages of control over Siachin have been overestimated, particularly in the wider context of a fully fledged conflict between the two countries when the main theatre of conflict is likely to be much further to the south. Nevertheless, Pakistan is scoring some valuable propaganda points, some military experience in high altitude warfare and, obversely, the Indian army is facing a limited conflict

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14 India Today, [31 July 1985], p.79.

of attrition. Pakistan's success in this quarter will increase the importance of the control and sovereignty of the Siachin region for India. It is an area of dispute which could precipitate a full-scale conflict under certain political conditions. Moreover, when placed in an historical context, any threat of territorial loss in this region assumes exaggerated dimensions.

In the rest of Jammu & Kashmir India faces another threat from Pakistan. The most obvious concern is India's strategic weakness around the Pathankot corridor, the so-called 'chicken's neck', which lies to the very south of the state. At the narrowest point of the corridor a mere 90 kilometres separate Pakistan and the steeply rising Himalayas. Above the corridor lies the whole state of Jammu & Kashmir. India fears a surprise attack from Pakistan in this extremely vulnerable area. Such an attack on the corridor could cut off India's rail and road access to the whole of Jammu and Kashmir. After declaring a cease-fire, Pakistan could open negotiations and offer back to India the seized territory in exchange for the valley of Kashmir.[15]

South of the 'chicken's neck' lies the state of Punjab which presents a completely different set of security problems for India, particularly since the army action against the holiest of the Sikh shrine, the Golden Temple in Amritsar, in June 1984. The Punjab, which is the home of the Sikhs, is the most productive and wealthy state of the Indian Union - it is often referred to as the bread-basket of India. Lately, it has become the centre of India's most contentious and violent internal security problem which stems from

15 Deshingkar [1984], p.9.

the Sikh claim to an independent homeland, Khalistan. Here, Pakistan holds numerous options for destabilisation, which New Delhi claims Pakistan has exploited in recent years. The Indian Government has produced the testimonies of several captured Sikh militants saying that the Pakistan government has permitted Sikh terrorists to establish training and supply camps over the border. This allows the terrorists a fundamental advantage which military strategists consider to be essential for the success of this type of long-term operation, namely the existence of a friendly border and access to bolt-holes beyond the reach of counter-insurgency forces, witness the important role played by Costa Rica and Cambodia in recent decades.

In principle the Punjab could be the staging area for a Pakistan attack upon India but in practice it is unlikely to be so. Traditionally, Pakistan has stressed fixed defences in the form of two deep and wide trenches around Lahore which suggests defence, not attack. India has also built significant fixed defences near the border backed by very elaborate defence in depth arrangements. For Pakistan, the capturing of Amritsar during a war would be of great psychological importance but, in order to move beyond the Punjab, Pakistani armed forces would have to cross two major rivers[16]. Given the cost and inherent difficulties in mounting such an operation, it is unlikely to be a realistic choice.

Further South of the Punjab lies the Rajasthan desert, an area in which much of the armoured fighting between India and Pakistan has taken place in the past. The arid and semi-arid environments lend themselves well to armoured manoeuvre. Here, the strategic advantage

16 Rikhye [1985], p.124.

lies with India, not Pakistan. In this theatre India would seek to advance to the Indus river, capture the road and rail links between north and south, separate the vital port of Karachi from the north and effectively cut Pakistan in two. This was precisely the scenario Pakistan feared during the Indian military exercise of October 1986-February 1987, codenamed Operation Brasstacks. Pakistan's options are less straightforward. It would take a long and resourceful campaign to make a major impact beyond the Rajasthan desert by capturing, for example, Jodhpur, Jaiselmere or Jaipur; and a long and resource-intensive campaign is precisely the type of warfare which Pakistan is least equipped to undertake. The only way Pakistan can counter an Indian attack across the Rajasthan desert is by threatening the narrow 'chickens neck'. This is what it chose to do during Operation Brasstacks and almost stopped the exercise in its tracks.

Finally, the most southern stretch of the border between India and Pakistan and the least likely theatre of attack is the Rann of Kutch. This area is a large salt waste, equally hazardous and attritious for soldiers and mechanised equipment alike. It is most unlikely that Pakistan would see much profit in mounting an attack in this region.

India's security concerns vis à vis Pakistan should also be seen in relation to the capabilities of the latter. Put simply, Pakistan is a weak country, both economically and strategically.

Economically, Pakistan has always been a curious country. It is known for being poor. In many respects, however, it is not poor. GNP per capita is one-third higher than India. The infrastructure -

roads, transportation, telephones - is superior to that of India. Indeed, Pakistan has been likened to Israel, it is politically beleaguered by large and powerful countries but it has been built by migrants with as much entrepreneural spirit as the Jews of Israel. The economy is growing by an average of 7% per year whilst population growth is a mere 2.9%. Migrant workers in the Gulf and non-resident Pakistanis repatriate large quantities of their earnings in foreign exchange.[17] Though indebted, aid flows into Pakistan without apparent misgiving.

Nevertheless, Pakistan appears to suffer as much as it benefits. Unlike Israel there is an amorphous lack of commitment to national development. Corruption is rampant - Karachi, for example, is now understood to be ungovernable[18]. Industrialists are wary of investment lest the recently elected Benazir Bhutto repeats the profligate and irresponsible nationalisation favoured by her father. Like India, many of the best and the brightest Pakistanis are working abroad. The Government admits to spending 40% of its revenue on defence, but the total is undoubtedly higher. Rich nationals keep a nest-egg of money outside the country.[19] Despite opportunities and potential, there have been as many failures as there have been successes in Pakistan.

Strategically, Pakistan's situation is less difficult to assess. To the north, Pakistan faces both Afghanistan and the Soviet Union. Relations with both are rarely warm. To the south, the country is

17 The Economist, [17 January 1987], p.3,4.

18 Rashid [1987].

19 The Economist, [17 January 1987], p.3,4.

dwarfed by India which has consistently intimidated and, on one occasion, divided Pakistan. Since its creation Pakistan's key ally has been the United States. However, relations have never been assuredly good. Although in recent years Pakistan has received two massive tranches of military and economic aid from the USA, which together amount to almost US$8 billion (about 40% was for military equipment), the relationship is a complex one. First, political and military leaders in Pakistan have never fully internalised their role as a client and Cold War accomplice. Second, the present aid agreement is based upon the dictates of the latest chapter of the Cold War, in which there are unequivocal signs of thaw, and the recently ended Soviet occupation of Afghanistan. Furthermore, Pakistan's ambitions to become a nuclear weapon state have convinced the US Congress that aid should be extended with great caution or withdrawn[20].

Although relations with the Reagan Administration were good, there is no certainty that this situation will continue. Now the Soviet Union has left Afghanistan, much of the rationale for such high levels of military aid will disappear, even though Soviet military and economic aid to the Afghan Government will certainly continue. The United States will eventually no longer require a consistent conduit for channeling arms to the mujahideen. Nor will the conceptual rehabilitation of Pakistan as a Forward Defense Area be as relevant as it was in 1980. In addition, it is by no means certain that George Bush will be as much of a friend to Benazir Bhutto as Reagan was to Zia, particularly when it comes to assessing military aid in

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20 Smith C. [1986].

relation to Pakistan's nuclear aspirations. After all, the key problem facing President Bush is a reduction of the federal budget.

Pakistan requires the support of a power such as the United States primarily because it is an artificial country, created by bureaucrats rather than by history or geography. It is surrounded by hostile neighbours, two of which are more powerful and involved in a treaty of co-operation and friendship. To be sure, this encirclement is to an extent offset by Pakistan's relationship with China but this relationship has never been very easy to assess. On the one hand, Pakistan has ceded territory to and has bought defence equipment from China. On the other, China is alleged to be assisting Pakistan with its nuclear weapon programme, possibly with regard to testing and the handling of fissile material at the criticality stage, but there is as yet no evidence for this. The benefits for China beyond the sharing of nuclear technology are difficult to discern, particularly given the declared Chinese policy of not sharing nuclear weapon know-how with other countries. Nevertheless, there are several observers, some of whom claim to be in possession of classified information, who are convinced that nuclear collaboration is occurring[21].

Above all, however, Pakistan is topographically very difficult to defend. It is a narrow country and most of the industrial centres and major cities lie close to the Indian border, on which there are no geographical impediments such as a major river or a mountain range. Karachi, Pakistan's only major port, is relatively easy for India to blockade. Thus, those responsible for defence in Pakistan confront the problem on two fronts and are forced to consider the

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21 Information made available to the author, May 1987

protection of 90% of the population and most of the infrastructure and economic assets.[22] Pakistan's vulnerable strategic position coupled with its economic weakness has forced defence planners to adopt a policy based upon offensive defence. Thus, during a crisis, Pakistan is likely to be the first to escalate to armed conflict and, moreover, will employ a heavy use of force to gain an initial advantage. Such a small country cannot trade space for time, nor can it sustain a war that lasts for longer than ten or fourteen days. (Also, Pakistan is heavily reliant upon US defence equipment and it is US policy to keep its clients on a short leash so that Washington is able to determine or at least influence significantly the outcome of any armed conflict in which client states become involved.) Equally important to Pakistan is the stress upon superior generalship and the high performance of its weapons systems.[23]

Both before and after 1971 Pakistan has always been a weak and exposed state. At no point, except perhaps during the Kashmir operation of 1948, has it been able to pursue a defence policy and posture any more ambitious than a capability which will raise significantly the cost of an attack by India. Indeed, even Pakistan's pursuit of a nuclear option can be seen in this way. Nevertheless, these views are rarely shared by policy makers in New Dehli.

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22 Tellis [1987b].

23 Cohen [1984], p.142

3.7 Pakistan and India's National Security Problem

Indian decision makers do not believe that Pakistan is capable of unpicking the Indian Union through military operations in Kashmir or elsewhere, although successive governments have traditionally made enormous political capital from a stress upon the military threat from the north-west and the linkages to the wider East-West conflict. In particular, during the fading months of Indira Gandhi's last term of office, the Government was all too quick to spot 'gathering war clouds' on the Indo-Pakistan border or perfidious 'foreign hands' at work inside the country, witness the tone of Government press releases and partisan media statements over this period.

The real threat from Pakistan for India, however, is much more complex. India's regional vulnerability stems not from great power presence or from Pakistan or China per se. The threat lies in India's own political weakness and the potency of centrifugal forces which run through the whole country; Nagaland, Manipur, Punjab, Goa, Tamil Nadu, Darjeeling, for example. What really concerns the more sober and thoughtful Indian security analysts is the link between partition and the potential Balkanisation of the Indian Union. Or, put another way, are anti-centre sentiments in Goa and Darjeeling symptomatic of the same basic problem which led to partition in 1947? Indeed, was the partition of Pakistan in 1971 a part of the same process in which India played a catalytic role? Once again, it is the very existence of Pakistan, an example of a minority achieving separation, which is the core of the problem. At one and the same time Pakistan is both tied to India's internal weaknesses and an

external security threat. However, the absorption of Pakistan is not an option, India's military strength notwithstanding.

Independence required India to become a nation state in contrast to the political culture which obtained for centuries before the arrival of the British. It was an alien and untried political format which exaggerated the authority and rule of the centre and, furthermore, presented the new Government in 1947 with the unusual problems of nation statehood, of which territorial integrity was one such example. In essence, the relationship between the British Indian Empire and the kingdoms prior to the arrival of the British was somewhat benign, founded as it was upon a mutuality of interests, or exploitation. Because India became a nation state at independence with a federal constitution which institutionalised centre-state relations in a different way, based more upon western political culture, the power relationship changed. Cosmetic legislative rather than cultural mechanisms, such as the imposition of a common language (Hindi) and revenue disbursements from the centre to the states, were used as a means of binding the 'nation' together to a degree which had no precedent. The conflicts and frictions which have resulted are a considerable source of confusion for India.[24] In addition to these structural conflicts there are majority-minority conflicts and Hindu-Muslim tensions have always been the most salient, at least until the recent troubles in the Punjab. Any dispute involving the Muslim minority in India always generates protests in Pakistan.

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24 For an insightful discussion of state formation in India see Rudolph and Rudolph [1987], pp.60-98.

Seen from these perspectives it is possible to understand why Indian opinions, particularly those based upon Hindu chauvinism, still consider Pakistan to be a salient security threat even though both the 1965 and 1971 wars (the Second and Third Rounds) went in India's favour, the latter in particular. Pakistan may not pose a significant military threat to India, and probably never will on account of its strategic weakness. Instead, Pakistan poses an altogether different type of threat, much less quantifiable than those which are rooted in strength, power and territoriality. It is the view of many decision makers that if Pakistan cannot be controlled and the power relationship maintained, the internal security problem could proliferate and bring about further acts of partition. This is mainly because Muslims and Sikhs could provide a trojan horse on behalf of the Pakistan Government which could break up the Indian Union and thereby create fewer security problems for Pakistan - Khalistan would provide a useful buffer state. It is particularly relevant to note the difference in India's approach to China, which has the distinction of inflicting on India its worst national humiliation in 1962. Pakistan has done no such thing but it is always considered within India to be a greater threat to security than China.

3.8 Indian Independence and the Emergence of China

For historical, political and, perhaps, cultural reasons Indian Governments have prioritised the security threat from the north-west, often if not always to the exclusion of other concerns. However, to the north and north-east is China, but Nehru paid little attention to

this area after 1947. Also, East Pakistan (now Bangladesh) was not considered salient; from an economic, political and military point of view it was never seen as a threat even when it was a part of Pakistan and much less so after 1971. It is also possible to exclude the security threat posed by the other small states such as Nepal and Bhutan. Although the SAARC (South Asian Association for Regional Cooperation) process may in time evolve to offer these countries a less impotent role, they barely figure in India's security calculus.

In the late 1940s China underwent tremendous internal, domestic upheaval which culminated in the success of the Communist 'liberation'. During the 1950s, Mao Zedong was concerned with the major powers, the Korean War and internal consolidation and retrenchment. Consequently, Nehru did not consider China to be either an immediate threat or a serious security consideration, although immediately after China's entry into Tibet (1950), Nehru took immediate steps to include Nepal in India's defence perimeter and extend Indian administration into Tawang, a monastery town beyond the MacMahon line.

In addition, the mid 1950s was the Bandung period and the spirit of non-alignment influenced India's perception of Chinese communism. The Bandung conference was in essence a meeting of those countries whose domestic interests lay in avoiding, even counteracting, the magnetic force field engendered by the Cold War. Bandung was a forum for the needy and indignant, in which neutral countries could display solidarity[25]. The Indian Government saw in Bandung not only a spirit of general non-alignment and neutralism but also a special

25 Calvocoressi [1977], p.267

relationship with China, the other major Asian power. Hindi-Chini Bhai Bhai (the brotherhood of Indians and Chinese) became the slogan of the day. Perhaps the goodwill between Beijing and Delhi was based on pragmatism as well. The evolution of a 'third force' in international politics could barely succeed without the participation of both.

In later years the spirit and intention of non-alignment and neutralism continued, albeit in a battered form. Cordial relations between India and China did not. Immediately after the success of the Chinese revolution, India was one of the first countries to both recognise communist China and extend goodwill. However, reciprocation on the part of Mao was hardly fulsome; Peking initially referred to the Indian government as both a 'puppet' of imperialism and an obstacle to movements of national liberation[26]. It was only when India proved its neutrality in the Korean War that China grudgingly accepted India's anti-imperialist credentials. However, towards the end of the 1950s, Sino-Indian relations deteriorated rapidly.

Ideology aside, China's problem with India concerned Tibet; a desire for a permanent incorporation of Tibet into China and a concomitant fear of Indian objections and even Indian covert support to Tibetan independence. For China, the annexation of Tibet was the final stage in the unification of the 'five races' in China. However, such a move would give India and China a shared and 'live' frontier. Thus, the Chinese had to legitimise and control the situation. The process

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26 Thomas [1971], pp.40-41

was a crude one; the 'liberation' of Tibet was accompanied by the denegration of India.

Despite the initial impulse of Beijing to create an atmosphere of hostility, Nehru refused to be drawn. Indian, or rather Nehru's, foreign policy was conditioned by the belief that China would not threaten India directly because it was preoccupied with both internal and external problems. Thus, Nehru felt that a policy of friendship would serve India's ends. After all, the 'third force' was worth a great deal in both the long and the short term. And, India could least afford either a war or a policy based upon deterrence through strength.

As a result, Nehru pursued a distinct policy of appeasement towards China on the Tibet question. Ideally, Nehru would have preferred China to accept a low profile relationship with Tibet based upon a system of suzerainty guaranteeing extensive autonomy for Tibet. To this end, during the discussions over the Sino-Indian treaty on Tibet, the Indian negotiators accepted the inclusion of a reference to the 'Tibet region of China'. Nevertheless, towards the end of the 1950s, a dispute over the Sino-Indian border arose and rapidly became intractable. Nehru continued to hope for a solution in India's favour based upon diplomacy but the Chinese Government wanted a package deal which included concessions by both sides. When Nehru's Government expressed its total inflexibility on the issue, the Chinese held 'the Indian bourgeoisie and their expansionist tendencies', as responsible for the impasse:

> "Interference in China's internal affairs by certain political figures is not fortuitous. India is a country that has gained independence after shaking off the colonial rule of British imperialism. It desired to

> develop its national economy in a peaceful international environment and has profound forces. This is one aspect of the picture. Another aspect is that the Indian big bourgeoisie maintains innumerable links with imperialism and is, to a certain extent, dependent on foreign capital. **Moreover, by its class nature, the big bourgeoisie has a certain need for outward expansion.** This is why, whilst it opposes the imperialist policy of intervention, it more or less reflects consciously or unconsciously, certain influences of imperialist policy of intervention. (emphasis added)[27]

However, at no point since 1947 has it been at all easy to see India as an expansionist power outside the sub-continent.

For India the Himalayan frontier is of critical strategic importance in relation to China. This has been so since the time of the British Indian Empire. In addition, the creation of a buffer zone in Tibet is particularly important given the complicated geo-strategic aspects of the area which comprises today's Northern and Eastern India, Northern Pakistan, Tibet and the Chinese province of Xinjiang (Sinkiang), Bhutan, Sikkim and Nepal.

To the extreme north-west of the sub-continent lies the border between India and Pakistan and the disputed area of Kashmir. The part of Kashmir controlled by Pakistan is contiguous with the Xinjiang province of China and close to the Tadzhik Republic of the USSR. The area separating the Soviet Union and Pakistan is the Wakhan corridor (which has been largely depopulated since the Soviet invasion of Afghanistan). Linking Pakistan to China is the mountain pass which now carries a highway through the Karakoram mountain range linking Gilgit in Pakistan to Kashgar in Xinjiang.

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27 Jen-Min Jih-pao [6 May 1959].

East and a little south of this point is the Aksai Chin area which is occupied by China but claimed by India. Further south there is a narrow parcel of land controlled by India which borders Tibet but has no natural communications features. Below Ladakh there is a short border between Himachal Pradesh (India) and Tibet which contains the strategically important Spiti Pass and below this area is the even more significant Shipki Pass, which used to be an ancient trade route but now links up to the Xinjiang-Tibet Highway. The northern border of Uttar Pradesh also borders Tibet with several passes that are also in proximity to the Xinjiang-Tibet Highway due to a complex network of ancient trade routes. Further south Tibet and Nepal share a border. There are several passes which can be penetrated. The Nara Pass, the Kodari Pass and the Rasa Pass are all points of access for China into Nepal and it is the exposed plains of Nepal which run into the Indo-Gangetic plain, the heartland of eastern India.

East of Nepal is the state of Sikkim which was until 1975 a protectorate of India but is now the twenty-second state of the Indian Union. Between Sikkim and Tibet there are several passes which can be used throughout the year. Sikkim is rich in timber and mineral resources and is close to Tibet in terms of culture and ethnicity. The strategically important Chumbi valley lies between Sikkim and Bhutan but is a part of Tibet. It is often described as a dagger pointed at India. Further south lies the Jalpaiguri district, a narrow corridor between Nepal and Bangladesh. This area is only one hundred and fifty miles from the Chumbi valley and links all the north-eastern states of India to the rest of the country.[28]

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28 Bandyopadhyaya [1979], p.34-36.

After backing down over the question of China's suzerainty over Tibet, by tacitly accepting the Chinese government's claims to 'liberate' Tibet, India lost the Tibetan buffer and sought thereafter to reach a working agreement with Communist China over the Macmahon Line, the border recognised by the governments of India and Tibet but not by China in 1914. The attempts failed and throughout the late 1950s relations with China grew steadily worse. India, to bolster its claims on the ground, adopted a 'Forward Policy' which put Indian troops behind Chinese positions. In 1960 and 1961, sporadic border incidents occurred and grew more frequent. On 30 November 1961, the Chinese delivered a written warning to India: 'The Chinese Government would have every reason to send troops across the so-called Macmahon Line and enter the vast area between the crest of the Himalayas and their southern foot hills'[29]. In April 1962 the eight year agreement over Tibet between India and China expired and Chinese activity in the disputed region intensified. In September 1962 war broke out and the Indian army suffered its worst and most humiliating defeat in an area in which it had long shown neglect and disinterest. The ramifications of defeat in this war will be considered later in relation to defence policy and posture.

3.9 The Maritime Threat: India and the Indian Ocean

When India became independent all security threats were deemed to come from the north west. Indian policy makers never appeared particularly concerned about threats from the sea. This was in part because the Indian Ocean was still patrolled by the Royal Navy.

29 Khera [1968], p.171.

Also, however, Indian defence decision makers decided to avoid too great an emphasis upon naval power because of the resources required to build-up a blue water navy. In later years, particularly during the 1980s, this policy was reversed as Indian policy makers came to see a much greater need for naval deterrence.

The Indian Ocean is the third largest ocean in the world, after the Pacific and the Atlantic. It extends over 75 million km^2. India is one of the most geo-politically important littoral states in the region. It lies at the very centre of an immense 'bay' reaching from the Cape of Good Hope around to the Australian city of Perth.

Immediately after the war it was the Atlantic and Pacific Oceans which attracted the attention of defence planners in the major powers, mostly due to the Cold War and the proximity of the superpowers to both oceans. The Indian Ocean was still considered to be a British 'lake', for good reason. After the war Britain maintained a considerable naval interest in the region and amongst certain littoral states, such as Singapore, Malaysia and Aden (now South Yemen). Over 100,000 British troops were stationed in the littoral islands and over 10% of Britain's defence expenditure was earmarked for operations in the Far East[30]. Under these conditions India had little to be concerned about in this theatre. Pakistan had no real naval capability until the 1960s and China had no access - in order to reach the Indian Ocean the Chinese navy would have been forced through the Straits of Malacca and/or Sunda and would have placed itself in direct confrontation with Britain.

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30 Braun [1983], p.93.

In the 1960s Indian policy makers recognised the need for a more conscious maritime strategy and policy changed significantly. By the early 1960s it became evident that Indonesia considered itself a significant maritime power and, moreover, laid claim to the Nicobar Islands which were under India's control. A marked decline in relations between India and Indonesia was arrested only when the Sukarno government collapsed in 1965.

Equally important for India was Prime Minister Harold Wilson's decision in late 1967 to withdraw British forces from all points east of Suez. Wilson wanted to direct more attention and resources to Europe. This effectively created a power vacuum which was filled primarily by the two superpowers. By the mid-1970s the region had become of particular significance for both powers. Apart from the retreat of Britain and the felt need to compete for new strategic advantage, the superpowers had other reasons for reassessing their position in the Indian Ocean.

For the Soviet Union, involvement in the Indian Ocean theatre and efforts to curry favour with several littoral states was an attempt to negate the successes of the American strategy of containment. In addition, ideology was important. Along the littoral there were many states, including India and Indonesia, which could be coaxed close to the Soviet camp. These were countries which displayed a leaning towards socialism even if their own communist parties were ignored and marginalised. Nevertheless, Soviet policy was founded more upon the basis of inevitability - eventually the progressive forces in the Third World would form an alliance against the pro-Western, reactionary forces. Moreover, the axes of conflict cut across the

Indian Ocean which also lent a form of inevitability to a Soviet presence in the region - the East-West, North-South and Sino-Soviet conflicts.

As a result the Soviet Union formed loose but significant bilateral ties with several of the littoral countries which laid the basis for a more opportunist policy towards the Third World during the 1970s, much to the consternation of Washington. In addition, the Soviet Union had another, equally important mission. Since the early-1960s the Soviets had struggled with Washington and the Western world in general to be taken seriously as a great power. On the negative side it required recognition of its military capabilities. More positively, it sought a form of détente which could only be achieved when other states recognised and adjusted to the relative strength of the Soviet Union. However weak the results may appear with the benefit of hindsight, this policy was in a large part responsible for many of the arms control agreements which were consolidated in the late-1960s and early-1970s.

Just as President Theodore Roosevelt had understood the meaning of naval power and force projection a half-century earlier and the British before that, the Soviet Union became aware of how important a significant naval build-up could be, particularly when massed in a volatile region which was logistically beyond the comfortable reach of the US fleets.

Direct military confrontation with the United States in this theatre is unlikely. A war between the two superpowers would likely take a nuclear direction long before the option to destroy merchant shipping

in the Indian Ocean is taken. However, the Soviet naval build-up has a considerable nuisance value. Apart from acting as a symbolic force, Soviet naval power in the region has initiated a 'base race' with the United States and the ability to shadow American naval manoeuvres has become valuable for intelligence purposes. Nor should it be forgotten that Polaris, Poseidon and Trident nuclear submarines which are targetted at the Soviet 'soft underbelly' are deployed in the region. Also, a more realistic mission for the Soviet Navy is to counter a Chinese nuclear build-up in the region.

Furthermore, the Indian Ocean is an untapped region for mineral wealth, fishing and possibly oil. The depletion of stocks in traditional Soviet fishing grounds, such as the North Sea, and the increasing importance of economic zones in less expansive maritime regions has made the Indian Ocean an attractive region for a major Soviet search for resources. As yet, however, it does not appear that the Soviet Union has any design upon the energy sources in the region, now or in the immediate future.

The undeniable wish on the part of the Soviet Union to use the Indian Ocean as a region in which to compete with the USA should not lead to a misunderstanding of subsequent American activities in the region. The superpowers are not involved in a traditional 'action-reaction' competition with each other for a form of cosmetic control over the Indian Ocean. The threats to the United States in this region are more than maritime.

First and foremost, the United States sees the Indian Ocean as an area which abuts the problematic 'arc of crisis'. Within this arc

there are substantial American economic and political interests, oil in particular. The current unpredictability of the Islamic world threatens the legitimacy and the efficacy of American influence, particularly in the Persian Gulf. The key feature of this threat is the apparent failure on the part of Washington to formulate an adequate response. In certain circumstances, such as with Pakistan, carrots and/or small sticks may work. In other places they do not. Moreover, as the Americans proved during the last months of the Carter regime, force is also difficult to apply. Ronald Reagan has also found the use of carrots ineffective, embarrassing and politically expensive.

The increasing failure of some key states in the Middle East and South-West Asia to recognise the legitimacy of the American role in the region has been disruptive for the United States. However, the policy response has been relatively orthodox. Within operational reach of the South-West Asian hinterland the United States has steadily increased its military power in the form of the Rapid Deployment Force (renamed since 1983 as the US Central Command).

Second, the Indian Ocean has become important for the United States because of developments in technology. Certainly, it can be well argued that the era of the gargantuan aircraft carrier as a viable military option for force projection may be drawing to a close. Air power, enhanced by missile capability, is outpacing developments in point defence and many Third World countries (including India) now have such a capability. However, in the case of nuclear submarines, a different situation obtains. In recent years the deployment of successive generations of nuclear capable submarines in the Indian

Ocean has had the military effect of opening another front. This is particularly true of the Trident submarines, in both their variants. Nor has there been a sufficient increase in anti-submarine warfare capabilities to threaten nuclear strike submarines in the region[31].

Because the Indian Ocean lies so far from either coast of the United States, there is a need for obtaining base facilities for basing agreements ranging from 'rest and recreation' facilities to a fully equipped base such as Diego Garcia. By and large, over the past decade, the American pursuit of such agreements has been successful. Apart from Diego Garcia, none of the bases impinge directly upon the immediate security concerns of New Delhi. However, in recent years there has been some concern over the possibility of the Pakistan, Bangladesh and Sri Lanka Governments offering basing rights or access in Baluchistan, Chittagong and Trincomalee respectively. Despite some rather sensational media reporting from within India and the occasional equally unsubstantiated statement from outside India, there seems to be little to suggest that the United States is seeking in earnest basing rights in this region. Nevertheless, questions relating to contingency planning and seizing 'windows of opportunity' should not be overlooked completely.

The question which is rarely asked inside or outside New Delhi is where Indian security interests and the presence of major naval powers in the Indian Ocean conflict. Over the past decade the Ministries of External Affairs and Defence have voiced criticism and concern about the increase in non-Indian defence capability in the

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31 For a non-technical but persuasive view which puts ASW and nuclear deterrence into perspective see Brown [1977], p.158-9.

Indian Ocean. However, few have asked how much these developments concretely impinge upon the security interests of India. Nor has there been any appreciable attempt at an official level to ascertain where the fit lies between naval threat perception and appropriate response in this particular theatre. Moreover, the advantage to India in having the US presence in the region guarantee the uninterrupted flow of oil from the Gulf is similarly overlooked. India too needs to import oil from the Persian Gulf and, furthermore, the sacrosanct nature of oil reserves established by the international community may in the future benefit India as it now does most OPEC countries, for India too has potentially enviable oil reserves within striking distance of many Islamic countries.

There are two ways to assess India's insecurity from the direction of the Ocean. First, what is the possibility that India might be invaded by an enemy approaching from the Indian Ocean? Second, how much are India's regional and international interests threatened by the recent activities of some major powers in the Indian Ocean?

From a purely military perspective India does have a sense of weakness in the south. Ironically, it suffers from a marked surfeit of defence in depth. India's defence arrangements traditionally concentrate the country's defence in the north, although a Southern Command has recently been established. In addition, the national capital is well to the north, which is important for a country with such a poor infrastructure. Furthermore, there is a cultural and political divide separating north and south which would complicate but not nullify the degree to which India could respond to an invasion from the south.

Obversely, it is difficult to conceive of a situation in which India would be threatened by outright invasion from this direction. New Delhi has created of late a blurred image of a threat from the ocean but it is no more than that. The only theoretically conceivable threat is from the United States. Yet to most observers outside India, and to many inside as well, there is no circumstance in which the Rapid Deployment Force would invade the beaches of Tamil Nadu or Kerala. It is difficult to see why foreign policy and defence planners see such a degree of insecurity in this theatre. It is, perhaps, for this reason that the threat is articulated in the vaguest of terms.

Second, India's external perspective on the Indian Ocean raises some interesting questions. The foreign nationals of Indian descent who reside in island or littoral states in the Indian Ocean number approximately 4.6 million[32]. However, the Indian Government has shown no particular strength of feeling when it comes to the often disturbing status of these minorities in East Africa, Malaysia and Burma, for example. Of late, the plight of Indians in Fiji and Sri Lanka has caused much greater concern but mainly for political not humanitarian reasons. Nevertheless, there are other factors which the Government might consider important. Many of these migrants are traders, often from Gujarat and Tamil Nadu. As such they establish good links with Indian businessmen thereby increasing India's comparative trade advantage in the region. Some are comparatively wealthy and through kinship ties they repatriate considerable sums of foreign exchange to India.

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32 Elkin [1987], pp.52-53.

Raw materials are also important. Since the early 1980s India has developed its oil industry and the newest fields are located off Bombay High and the Orissan coast. Together, these oil fields provide a good proportion of India's fossil fuel requirements which are essential to economic development and the military's petrol, oil and lubricant (POL) requirements. Furthermore, India has a substantial merchant navy and the Indian Ocean is potentially rich in mineral deposits such as manganese and other metallic nodules.

Certainly, these commercial and economic attributes add up to something worth protecting. However, translating the protection of these assets into a part of the security equation is difficult. The treatment of Indian nationals in countries such as Uganda, Kenya and Fiji has not by and large drawn a particularly militant response from the Indian Government. In reality, the Indian Government is impotent to act outside the sub-continent, just as Western Governments can do little about the harsh legal penalties imposed upon Western narcotics smugglers convicted in Asia. The protective wall of sovereignty is difficult to breach, short of invasion. The exception is, of course, Sri Lanka, where 70,000-100,000 Indian troops are currently stationed. In addition, in 1988 an Indian task force successfully prevented a coup d'état in the Maldives. In the same year unsubstantiated reports emerged suggesting that the Government was considering sending a naval task force to Fiji in a display of forceful protest against the disenfranchisement of Fijian Indians.

Nor can it be convincingly argued that India faces the prospect of a resource war within its Exclusive Economic Zone. Its off-shore oil

fields constitute only a partial source and are not likely to attract aggressive foreign exploiters. In the case of mineral reserves, conflicts over these will be contested in international courts of law and United Nations fora, not the ocean itself. In this respect, the naval presence of the superpowers and the increasing strategic importance of the region will serve as an unintended benefit for India. A country such as Indonesia would be very reluctant to wage a regional resource war in such a sensitive area and both superpowers would be keen to prevent a collision between regional powers. Indeed, in this respect New Delhi has more to fear from its liberal policy towards multinational corporations than it has from the military force of other states.

Despite the undeniable fact that India is a rising middle power in all senses, it has little to fear in either a territorial or an economic sense from the present configuration of power in the Indian Ocean. Unless India seeks to extend significantly its sphere of interest, military activities in the Indian Ocean short of nuclear war will not affect dramatically the health and welfare of the Indian state.

Finally, in the light of recent events, it is relevant to consider India's relationship with Sri Lanka. In a similar way to the position in the north, the ethnic conflict in Sri Lanka is tied to the internal crisis facing the Indian state. In the final analysis, Indian intervention was prompted by the non-negotiable positions adopted by the Sri Lankan government and the Liberation Tigers of Tamil Eelam (LTTE). Bellicose and heavy-handed though the peacekeeping operation may have been, it arrested the inevitable

drift towards violence and carnage on a massive scale. In addition, unlike the British in Northern Ireland and the Turks in Cyprus, where comparisons are frequently drawn, the Indian Government is keen to withdraw. The cost of the peacekeeping force, some $3 million per day, is too high a price for a poor country to pay over an indefinite period. Furthermore, given that a strong political rationale for the involvement of the Indian Government stems from the tension between the Union government and the state of Tamil Nadu, it is a stratagem which could backfire.

3.10 Security Perceptions in the Indian Sub-continent: Concluding Remarks

At this juncture it is important to recognise a paradox. Any discussion from a non-Indian source whose affinity to the country is primarily intellectual will inevitably fail to recognise completely how perceptions and reactions to threat really affect individual decision makers and voters at the socio-psychological level. For example, the level of public enmity, particularly in North India, towards Pakistan is often grossly underestimated. Obversely, as the published material often reflects, Indian commentators can allow xenophobia and popular mythology to colour their views on security, particularly in relation to Pakistan (as distinct from Muslims)[33]. This degree of polarisation cannot be eliminated but it can be reduced. To some extent, the views of each will never be acceptable

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33 During an interview with a prominent member of the defence community I was told in response to a question relating to India's views on nuclear disarmament and its stance on nuclear proliferation vis a vis Pakistan that the problem of dealing with Pakistan at this level was that they were all madmen.

to the other. Nevertheless, the existence of this paradox should not nullify attempts to acquire a better understanding of the roots of Indian security perceptions.

An essential aspect of the regional security problem for India lies in the historical development of the Indian state. External observers invariably fall into the trap of analysing Indian security perspectives from two intellectually flawed positions. First, there is a tendency to adopt a tidy but a-historical approach which ignores the elements of continuity and discontinuity which exist between the major periods of Indian history. Thus, the complex and unique development of the Indian nation state and the relationship to contemporary foreign and defence policies is overlooked. Certainly, the development of India's security dilemma can be dated from independence and partition. However, the response of India the nation state to external threats is in part both shaped and complicated by what existed before. Second, analysts tend also to see the Indian nation state as a convenient unit. Internal contradictions may not be directly linked to external perceptions but both exist in a dialectical relationship.

That security problems exist for India is not in question. Although relatively safe from external invasion, as it has been since 1947, the very survival of the Indian state is in part threatened by events and entities inside its borders, particularly Sikh extremism. Further, these internal contradictions have made an impact upon, and are linked to India's relations with other South Asian countries. Thus, for as long as marked centrifugal tendencies exist internally, India will be less secure within South Asia and attempts to normalise

relations with, say, Benazir Bhutto's Pakistan will fail if Sikh extremists decide that failure is a preferred course of action for their cause. Conversely, to a certain degree the Indian Government requires an external threat in the shape of Muslim Pakistan or Communist China as a part of a negative nation-building process. At critical points external threats may create a form of internal, domestic political cohesion which is far from evident in contemporary India under normal conditions.

The troublesome aspects of India's security problems are twofold. First, the resolution of South Asia's security problems in general seem at present to be infinitely more complicated than the type of 'security dilemma' which exists in the West. For the future, the tenuous 'no war, no peace either' stalemate will turn largely on the ability of the Indian state to understand, manage and control its domestic problems. Yet there does not appear to be either the political capability or the political will to grasp this particular nettle. As so many Centre-State conflicts become time-honoured and reluctantly accepted by the polity as unfortunate facts of contemporary life, solutions will become more difficult and the tendency to use regional problems to explain domestic crises will be more tempting.

Second, and equally problematic, is the Indian Government's response to its security problems. Essentially, complex and deep-seated political problems are side-stepped and this process of prevarication is masked by a series of military-technical fixes which bear little relation to the true nature of India's security problems yet sufficiently strain the exchequer to engender security problems in

other non-military spheres, such as food security. Why, for example, does India require a 3:1 conventional superiority over Pakistan, a neighbour which it has successfully partitioned and whose weaknesses are evident? Moreover, this scale of domination emerged well before Pakistan's nuclear ambitions became evident. Why too is India concentrating so much upon the threat from the Indian Ocean which at best is grossly exaggerated and at worst is beyond India's control and direction? Why is the response to China so different to the response to Pakistan when essentially the threats are not dissimilar? True, the threat from Pakistan is made all the more worrisome on account of the Muslim population in India, Kashmir and the bitter memory of partition. It is also true that the least activity by China in border areas creates panic in India, witness the sharp dip in bi-lateral relations which occurred in 1986 for few good reasons. China, it seems, has never lost its status as both a long term and serious threat to India but, overall, the attempts at reconciliation and normalisation in this quarter are more sincere - where possible the China problem is tackled at the diplomatic level but the threat from Pakistan is habitually explained in military terms.

Clearly, however, there are other factors to be considered and investigated. Are Pakistan and other security issues as critical for India as levels of defence preparedness would suggest? If not, then what precisely are the driving forces behind India's search for military power? Although the response to external threats may be primarily military it is not necessarily the case that military activities are the outcome of external threats. This is the case in other countries, particularly amongst OECD countries, and it could well be the case in India.

To several observers both inside and outside India the configuration of Indian defence policy appears to make little sense because it relates so unevenly to India's insecurities, although this is an area of enquiry which has received less attention than it deserves. In the following chapters the mismatch between defence policy and external security threats will be explained. Nevertheless, defence in India will be seen to have a logic of its own, however destructive this may turn out to be in both an economic and a political sense.

CHAPTER FOUR

DEFENCE POLICY AND PRACTICE: 1947-1962

Until the 1971 war with Pakistan, the 1962 war with China had been the most significant factor in India's short history as an independent nation state (see Chapter Five). Since that humiliating defeat successive Indian Governments have given defence a high profile to ensure that amongst both the voting public and regional adversaries there is confidence that India is well defended. In the immediate aftermath of the 1962 war, decision makers and the critics of the Government concentrated upon three sets of reasons for the failure to prevent not just defeat but also the abortive attempts to check the scale of the humiliation and the ineptitude of the defence effort.

First, Nehru was severely criticised for misreading Chinese intentions and failing to prepare for war. This failure was seen to be a by-product of non-alignment, but this was a rather simple-minded interpretation of a very complex situation. Second, Krishna Menon was criticised for under-equipping the armed forces, although this too was at best a simplified and misleading view of what Menon was attempting to do within the Ministry of Defence. During his tenure as Defence Minister, Menon had changed the emphasis of defence policy, particularly in relation to defence production. His root and branch reorganisation of the defence sector engendered considerable ill-feeling amongst senior members of the armed forces. His service promotions were considered to be politically motivated and led on one occasion to the attempted resignation of General Thimayya, the Chief

of Army Staff. Menon's arrogant handling of the defence portfolio made him unpopular in several quarters and a natural target for Parliament and the press during the embittered post-war atmosphere. Third, the country was widely considered to be generally underdefended.[1] Indian leaders were assumed to have lacked the political will to ensure adequate defence arrangements between 1947 and 1962. As a result, when the Chinese attacked India lacked the material to defend itself.

This alleged lack of preparedness is the subject of this chapter. Surprisingly, this question has only been lightly covered by defence analysts. It is generally considered to be unimportant because during this period defence expenditure was extremely low, procurement modest and, more generally, defence was the junior partner of development on the one hand and non-alignment on the other. In fact, this was not the case. Not only did defence have a life of its own but it was also much more prominent than what most, if not all, analysts have thus far suggested. By looking beyond what India was spending and acquiring for defence purposes it can be shown that the period between 1947 and 1962 was extremely important, both qualitatively and quantitatively. It was during this period that many of the key debates concerning future defence and foreign policy were decided and, contrary to popular opinion, it appears to be the case that Indian decision makers were ambitious, not cautious. This entailed rather more expenditure than is immediately obvious from the allocations to the defence sector and it also required the sanctioning of key defence missions which added up to a defence

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1 For a comprehensive coverage of these issues see Thomas [1978].

posture which conflicted with the statements made by Nehru and others during that period.

4.1 Defence Before Independence

Prior to independence, defence was a neglected aspect of thinking amongst the leaders of the Indian National Congress (INC). References to defence in early INC resolutions and policy documents are very limited. When defence issues did emerge they were often in the context of industrialisation strategy: a free India would strive to develop defence industries under public ownership subject to the ability of the state to mobilise sufficient resources and capacity[2]. Generally, the INC collectively assumed that a free India would be relatively secure from attack and invasion on the basis of natural frontiers and its neutral and peaceful status as a post-empire state. After so many years under the yoke of the British Indian Empire independent India would emerge as a model and example of a new nation which no major power would consider worth the risk of invasion - the political cost would be too high and the economic returns too low. This propensity to ignore defence was strengthened by the primacy of non-cooperation and non-violence in Indian thinking and the overwhelming concentration of the struggle for independence as an end in itself. Furthermore, Pakistan was not a consideration until the eve of independence and few senior INC members foresaw major tensions emerging with other countries, such as the Soviet Union, or direct threats to Indian sovereignty.

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2 Indian National Congress [1954], p.32.

When Nehru became a prominent member of the INC he shared many of his colleagues' assumptions concerning the future defence of independent India. However, at the same time, he attempted to inject more thinking and sophistication into planning for future defence needs and foreign policy goals. A free India, he maintained, would be equally protected by the balance of power in the world at large. None of the major world powers would be prepared to permit the invasion of the sub-continent on account of its geo-strategic, political and economic potential and importance once the British had left. During the 1930s Nehru wrote frequently on the issues of foreign policy an independent India would have to deal with in the future[3].

Mahatma Gandhi gave little thought to the national defence issue but wished to institutionalise non-violence when India became independent, which would have had major implications for future defence plans. In stark contrast to the prevailing Gandhian ethic based upon non-violence, non-cooperation and anti-militarism, Nehru and Subhas Chandra Bose, subsequently the leader of the Indian National Army (INA)[4], gradually developed their own independent views on defence and both argued for the creation of a military capability based on a defence industry under solely public ownership. As early as 1928 Nehru stated his position on defence on several occasions without equivocation, for example,

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3 See for example Nehru [1936].

4 The INA was formed in 1941 when captured Indian soldiers drawn from defeated units of the British Indian Army in the Southeast Asian theatre were organised by the Japanese invading forces into an Army which would fight alongside Japan for the 'liberation' of India. Subhas Chandra Bose revived the INA in 1943, to great effect.

> "When freedom comes, we shall develop our army and strengthen it and make it more efficient than it is today."[5]

At a meeting in Bombay in March 1946 Nehru remarked upon the fluid state of defence due to scientific developments, although he declined to comment directly upon independent India's defence policy. Nehru was fascinated throughout his life by modern science and its potential role in an independent industrial India,

> "It is science alone that can solve the problems of hunger and poverty, of insanitation and illiteracy, of vast resources running to waste, of a rich country inhabited by a starving people ... The future belongs to those who make friends with science'[6]

Nehru envisaged a major partnership in the future between the scientific community and the armed forces in the same way as he worked towards similar partnerships for development. Indeed, the establishment of 'mother industries' to produce the means of production under public ownership was a key tenet of INC policy. Also in 1946, Nehru informed another audience in Bombay that India would defend itself by all the means at its disposal and apparently implied clearly that this did not exclude nuclear weapons, or atomic weapons as they were known during that period[7].

4.2 Independence and the Formation of Defence Policy

Beyond the occasional statements by Nehru and Bose the INC came to power in 1947 without a defence policy of much substance - the goal of independence and the accompanying sentiment of nationalism had absorbed the energy of the movement to the cost of virtually

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5 Bright [1946], p.152.

6 Vishvanathan [1985]. Quoted originally by Ram [1966].

7 Kavic [1967], p.27.

everything else. Once independence had been achieved Nehru, as the first Prime Minister, was confronted with the task of moulding India, now divided into two sovereign independent states since the withdrawal of the British, into a viable nation state. Partition and the impact of the First Round (see Chapter 3, pp.107-109) had highlighted the problem of defence and sovereignty giving both a sense of urgency. In this context, as Prime Minister, Nehru had three major problems to confront.

First, the INA had been emasculated by the British some years before independence but a legacy remained insofar as the ideas and example of Bose, who died in 1946, appealed to those concerned with direct action and ethnic unity. Although Congress had great credibility with the former, it commanded less respect in relation to the latter, particularly since it failed to prevent partition. Furthermore, the INA has been a popular force in the struggle for independence and its suppression by the British had increased its appeal amongst the rank and file and, in particular, with the extremists. Bose, who attempted to align himself with the Axis powers during the war, peddled a political philosophy which conflicted directly with the teaching and example of Gandhi,

> "Bose viewed the I.N.A. and its officers in highly political terms. Like the military of totalitarian states, the INA was regarded as a center (or one of the main centers) of politics and national regeneration. It was the model of an Indian 'people's army', a military organisation truly representative of the nation, the focus of national attention, the servant of a neototalitarian ideology."[8]

For the Congress leadership the INA represented a total antithesis of both the ends and means of the movement for independence. Yet, paradoxically, the INA was extremely popular and potentially a threat

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8 Cohen [1971], pp.162-163.

to both the hegemony of the Congress Party and, indeed, to the process of representative government. It was a difficult circle for the Congress to square. First, the INA unequivocally and deliberately compromised the ethic of non-violence and much of what the INC stood for. Second, it would have been a substantial political risk for the Congress to alienate such a powerful group. Third, the INA had challenged the monopoly of the INC as the body which had achieved independence, albeit without sucess.

Somewhat fortunately for the Indian National Congress, Bose had died in 1946. After the Second World War, most of the INA officers were shot, the troops demobbed and the INA gradually faded away as a political force. However, the threat of resurgence and the existence of an old guard remained as problems. In order to both reward and emasculate the movement the remaining ex-INA members of sufficient status were dispatched to various corners of the world as high status ambassadors, who could not criticise their own government. Others were given positions at home on a deputy minister level.[9]

This process of assimilation without marked alienation or threat was, according to Stephen Cohen, 'an act of great political skill', a judgment with which it is difficult not to agree[10]. However, although the INA had been dissolved, Nehru was mindful of the popularity and prestige Bose had commanded. With the INA's high profile with the Indian public, the spectre of militarism had emerged within India bringing with it the possibility, albeit distant, of an active role for the military in the Indian political process[11]. In

9 Cohen [1971], p.165, fn.# 51.

10 Cohen, [1971] p.163

11 India is often if not always thought to be one example of a developing country where the military is content not to

addition, the Army was the most powerful and well organised institution in the country even though it was not controlled by INA members or sympathisers. Indeed, Cohen has also argued that the low profile defence policy eventually adopted by Nehru was a direct result of the popularity of the INA and there may well have been a direct connection between Nehru's outward policy framework and the legacy of the INA[12].

Throughout his short career Bose spoke and wrote at some length about the issue of defence in a free India, even though he managed to say little of substance about policy. For Bose the Indian Army was a symbol of both subjugation and complete independence. During the Round Table Conference sessions, between 1930 and 1933, Bose was openly critical of Gandhi's failure to voice without equivocation the demand for full control over the Indian armed forces. Then, in 1933, the British Government issued a White Paper which stated that the Governor General, rather than elected bodies, would have control over the 'independent' defence forces[13]. Quite understandably, Bose read into this an attempt by the British Government to retain an option to maintain its monopoly over organised force, which could be exercised at will thereby having the effect of negating the political gain of representative government. For Bose, firm control over a strong defence force and independence were two sides of the same coin,

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intervene in the political process. However, in the late-1950s and early-1960s commentators on India and Pakistan, such as Hugh Tinker, were suggesting that if public order in India degenerated as it had done in Pakistan the Army might intervene, given that it was the real power behind the state administration. The confidence shown towards the Indian military as an apolitical force is more recent.

12 Cohen [1971], p.1676

13 Amita [1984], p.90.

> India wants the status of a free country, with her own flag, her own army, navy and defence force, and with her own ambassadors in the capitals of free countries ... Independence which India aspires after, today, is not 'Dominion Home Rule' as we find in Canada or Australia, but full national sovereignty as obtains in the United States of America or in France ... Building up a national army will be a ... difficult task. ... the dearth of Indian officers of high rank remains and will present some difficulty in building up a national army. In this connection India's chief problem will be to train up a large number of officers of all ranks within a period of ten years - and thereby complete the formation of the National Army. Along with the Army, [the] Navy and Air Force will also have to be built up..."[14]

Somehow, therefore, Nehru had to develop a defence policy which did not appear to take too many leaves from the INA's book, a difficult task considering the erstwhile convergence of Nehru and Bose's defence views prior to independence.

The second problem which influenced defence policy after 1947 was partition. Naturally, early policy makers had no idea that partition would accompany independence. Still less were they prepared for the bloodshed and carnage which accompanied partition or the atmosphere of profound mistrust and hatred between India and Pakistan which resulted. Also, partition readjusted completely the erstwhile policy based upon India's relative power in the region, about which the INC leadership was so confident before independence. Through partition India lost the deep port of Karachi - strategically important for naval docking purposes - and many of the natural features which could have inhibited territorial invasion, although India's geo-political importance remained largely unchanged. In addition, India acquired a significant security problem in the form of Pakistan which promptly resulted in both a war and a significant loss of territory in Kashmir.

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14 Bose [1964], pp.366, 453-454.

The third problem which influenced defence policy in the formative period was that the creation of a new state in the region further provided an extra avenue for major powers to project power and influence and an opportunity for competition by proxy; the history of superpower influence in South Asia would have been markedly different without the creation of Pakistan. Nehru made a conscious attempt to sidestep the Cold War and avoid being dragged into the force field of superpower politics. India's experience during the two world wars was also at the forefront of Nehru's mind and he wanted to avoid putting his country in a position whereby it could be drawn into a war without its prior consent. Coupled with India's extreme weakness, this led initially to a policy of neutralism which later became more active in the form of non-alignment. Here, Nehru and Menon were being primarily pragmatic. If the Congress Party was to survive the early years of independence, it was essential for it to meet at least some of the rising expectations of the masses following the departure of the British. However, involvement in superpower politics would have led inevitably to rising defence expenditures even with grants and aid from, say, the United States. Increased defence expenditures during this period would have affected significantly the resources available for development. This is not to doubt the sincerity of Nehru's <u>foreign</u> policy, his commitment to a 'third force' and his role within the United Nations, but, pressing domestic concerns were also a factor which influenced the evolution of foreign policy - a guns without butter routine for India could have been political suicide for the Congress Party.

During the first decade of independence, Nehru was determined to industrialise the Indian economy and bring millions above the poverty line, all within the framework of democratic socialism. In order to

achieve this end, Nehru realised that defence expenditure had to be subject to the strictest control. Consequently, between 1947 and 1962 defence expenditure was low, averaging no more than 2% of GNP per annum. During this period the net national product increased unevenly and the rate of growth fluctuated between one and four percent. Allowing for an increase in population of over two percent, very little was left over for increases in standards of living or, indeed, improvements to the national security apparatus.[15] Furthermore, Nehru also prompted a political debate regarding the effect of high defence expenditure upon national development.

Consequently, when designing a policy for defence, Nehru seemed keen to ensure three basic conditions. First, the armed services and the threat of militarism had to be kept in check. Second, given the nature of the relationship between defence and foreign policy, the attainment of self-sufficiency in defence production and independence from the superpowers became two important criteria. Third, over the course of the nation-building programme, expenditure on defence should not reduce significantly the resources available for investment.

4.3 The Blackett Report

In practice, however, it seems that Nehru lacked the expertise to translate his broad policy aims into a strategy for long-term military building in general and arms procurement in particular. Neither he nor his civilian advisers understood sufficiently the intricacies of military technology and strategy and the advice of the

15 Figures taken from Chaudhuri [1978], p.52.

service chiefs alone would have been inappropriate and insufficient. Consequently, Nehru sought the advice of an outside expert, a famous British physicist, P.M.S. Blackett, who later became the President of the Royal Society. Nehru asked Blackett to prepare a report outlining the measures necessary for India to become near self-sufficient in defence production over a period of approximately seven years (the time scale appears to have been arbitrary), but at the same time to retain adequate defence and security. During the second half of 1948, Blackett assessed India's economic, industrial and technological capability in a geo-political framework. The result was a short report submitted to the Indian defence minister, in which Blackett attempted a study of how India could 'best cut her defence coat according to her scientific, financial and industrial cloth'[16].

In 1948 India's per capita income totalled less than one-tenth that of the United Kingdom and industrial production was a mere two percent of the same. Blackett endorsed the need for self-sufficiency but he framed his recommendations in the context of available resources. The Blackett Report followed an earlier report by another British advisor, Dr Wansborough Jones, who had previously submitted a paper on the scientific and organisational measures required to make India a self-supporting defence entity. The paper was commissioned by the Interim Government prior to independence in 1947. In this report Wansborough Jones outlined four central roles for the Indian armed forces. First, to secure the land frontier against raids from border tribes or from attack by a second class army. Second, to support civil power; this role was later dropped and correctly ignored by Blackett. Third, to provide a small expeditionary force capable of protecting India's regional interests. Fourth, to develop

16 Blackett [1948].

a force capable of taking the field in a first class war; this had to be achieved from available financial resources. With the exception of the second element Blackett followed these guidelines.

From the outset Blackett worked from the assumption that India was a new nation which wished to stand unaided in defence issues. This was in direct contrast to a previous, pre-1947 conception held by Britain that India would look towards the Commonwealth of Nations for protection in the event of hostilities, particularly in relation to naval assistance. Blackett realised that defence policy had not yet acquired either a traditional pattern or entrenched bureaucratic interests, which would make policy shifts very difficult once final decisions become increasingly characterised by bureaucratic-political criteria[17]. Ample opportunity existed for an innovative approach to both defence doctrine and policy. Above all, Blackett advised the Indian Government not to prepare to fight a Third World War which he considered both irrelevant and impossible anyway: India's defence needs were primarily related to threats from the North-West. Technical planning for a small scale war was the fundamental requirement, although this did not eliminate conceptualising for a more sophisticated defence profile in the future.

Blackett's starting point for his defence plan was India's extreme economic weakness. On this basis he outlined the choices open to the Government. In order to become self-sufficient a strong economy and industrial base was essential. The import of sophisticated defence equipment would drain foreign exchange reserves and slow the rise in national income through industrialisation and improved agriculture,

17 For an excellent explanation and analysis of bureaucratic politics in the US context see the unparalleled essay by Allison [1971].

upon which any future rise in military expenditure would itself be based. In fact, Blackett recommended initial reductions in defence expenditure to encourage growth in other sectors.

In relation to choice of technology Blackett recognised the inevitability of foreign imports but suggested a strategy for minimising the impact of defence imports on foreign exchange reserves. He proposed the bifurcation of procurement into competitive and non-competitive weapons. In so doing he kept in mind India's likely enemies and chose to ignore major power intervention on the understanding that such a scenario would inevitably draw in other major powers, which would to some degree protect India's interests. Thus, even if India was in possession of extremely advanced military equipment it would not be quantitatively sufficient to offer many independent options against a major power given the posture India could afford in the foreseeable future.

Competitive weapons were the type of front-line weapons platforms which relied upon state-of-the-art technology for optimum performance during engagement with enemy forces - fighter aircraft, heavy tanks, an aircraft carrier task force, for example. Non-competitive weapons were those which were used in roles which did not require optimum military performance characteristics in order to be effective - small arms, field guns, motor transport and night bombers, for example. Both the USA and Britain possessed large matériel stockpiles following the end of the Second World War. If India bought up some of these surplus stocks, if it avoided where possible high performance weapons choosing instead low-performance weapons in non-competitive areas, and linked defence planning to relevant scenarios, a measure of self-sufficiency was possible in the future.

If surplus weapons were available Blackett saw only three reasons for importing new and improved models. First, when the weapon was highly competitive. Second, if an non-competitive weapon system offered a markedly improved performance over its predecessor so as to justify the capital cost by reducing running and maintenance costs. Third, to supply training schools with single models to keep the services in touch with modern developments. Furthermore, Blackett argued that self-sufficiency would create freedom of choice in foreign policy rather than strategic isolation. Although Blackett did not place particular stress upon this observation, it was in fact of immense importance because therein lay the link between a preferred, affordable and independent defence policy and posture, as outlined by Nehru, and the policy of non-alignment.

With regard to the composition of the three services, Blackett made a series of specific recommendations. Wisely, he paid considerable attention to the missions of the armed services as well as the type of equipment each should be seeking.

The Indian Navy was ascribed three central missions[18]. First, to protect coastal shipping against mining, submarines, surface and airborne attack; coupled with the capability to respond in kind. Second, to escort and protect a small number of ocean convoys between Aden and Singapore but no further; merchant shipping was always going to be a valuable national asset for India and important for the development of trade. Third, to co-operate with the Army and Air

18 The Blackett Report contains far more detail on naval policy and is quite weak on considerations for the Army. This is undoubtedly because Blackett was a naval officer during the Second World War and had relatively little knowledge of ground forces and tactics.

Force in repelling enemy landing operations and advances along coastlines, and to be able to undertake similar operations against the enemy. Given the general principles from which he was working, Blackett argued that the acquisition of cruisers was inadvisable due to a combination of cost and vulnerability; the deep draught of a cruiser renders it vulnerable to mines and submarines. With the exception of convoy protection, the advice was invariably the same - opt for small, cost-effective and non-prestigious systems for the central missions and generally. Surprisingly, in view of the costs involved, the acquisition of a small escort carrier for convoy protection was recommended and justified on the basis of having greater utility than the cumbersome cruiser. However, Blackett also pointed out that such a mission was far too expensive for India at that time and, moreover, that 'India's assumed opponent', i.e. Pakistan, would be unlikely to acquire the type of bombers required to attack convoys in the foreseeable future.

In his discussion of the future of the Indian Air Force, Blackett's recommendations were much more guarded. First, he ruled out a long range bombing role on the basis of cost and efficacy. Blackett was also highly opposed to strategic bombing on humanitarian grounds following the destruction of German cities during the last stages of the Second World War[19]. In particular, he argued that India could not hope to acquire a precision bombing capability, so any long range bombing mission would have to be directed against civilian population centres. Apart from the unlikely military gain, such action might lead to a campaign of mutual destruction,

> "In view of the high density of India's own cities and the impossibility of affording an adequate defence against enemy air attacks, it would seem a great mistake

19 Zuckerman [1982], p.111.

> for India to initiate such a campaign of mutual destruction, and probably even a mistake to retaliate in kind even if so attacked."[20]

Where India could profit was through the acquisition of smaller, single-engined fighter-bombers which would not need fighter escort and offered an adequate if not an optimum strike capability. Blackett was also unconvinced that the IAF required jet fighters. Apart from the need to evaluate carefully the suitability of, for example, Vampires and Meteors for the arid and semi-arid conditions of North-West India[21], jet fighters were also too fast to offer joint Army-Air Force target identification missions. Nevertheless, Blackett endorsed fully the procurement of night fighters, photo-reconnaissance aircraft and trainers, and he recommended a major boost to the Hindustan Aircraft Factory at the earliest possible moment.

Blackett's report was much less comprehensive on the future role of the Indian Army. However, he did highlight the potential for a relatively rapid progress towards self-sufficiency which would be made less difficult by the prior existence of ordnance factories established by the British. In addition, the Army was the best possible candidate for the exploitation of non-competitive equipment. The only specific recommendation was for the development of highly trained anti-aircraft units to protect airfields, factories and other key targets.

Finally, Blackett considered the role and organisation of defence science in India. This contribution was perhaps the most relevant in

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20 Blackett [1948], p.12

21 This was presumably due to problems relating to dust and high ambient temperatures.

the report, particularly in relation to self-sufficiency. First, Blackett dismissed India's potential for developing an indigenous capability in the more advanced fields of defence technology, such as chemical and biological warfare, high performance aircraft, guided missiles, atomic warfare, millimetric radar and large ship design. Instead, the preferred route towards self-sufficiency should be in increasing the efficiency of weapons systems which were both tried and tested and familiar to both the armed forces and defence scientists. Thus, both servicemen and scientists could usefully collaborate on radar tracking, interception, bombing accuracy and air attacks on ships. Equally, the scientific community should be given the space and resources to nurture a research and development capability that was both relevant to India and kept abreast of developments elsewhere by covering in detail the open literature on defence science and technology. This called for a considerable increase in funding, sound organisation under the Scientific Adviser to the MoD and carefully controlled collaboration between the Government, the armed forces and the science community.

The Blackett report appeared to be accepted by the policy makers of the day. In February 1949 Blackett received a letter from the incumbent Defence Secretary, H.M. Patel, which read,

> "I am glad, however, to be able to inform you that **the Government have accepted your report practically in its entirety.** The only important point of difference related to your recommendations for the Navy, but the difference is not, to my mind, one of great substance." (emphasis added)[22]

However, despite Patel's comments to Blackett and the realistic and affordable policy options offered to India, Blackett's recommendations were either ignored or very poorly implemented.

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22 Letter from P.M. Patel to P.M.S. Blackett, D.O. No 62/5/49, (Ministry of Defence, New Delhi, 10 February 1949).

Thereafter, Blackett's contribution to science and technology in India came only in the form of proposals to reorganise the National Physics Laboratory, the task for which he is most well-remembered[23]. However, according to one former decision maker, Blackett moved from defence to non-military science policy primarily because he considered his efforts in the former to have been a failure[24]. Although the report remained both well known and well read by policy makers, it also became an unpopular document in later years. At a press conference to celebrate the silver jubilee of the Defence Research and Development Organisation on 12 January 1984, the incumbent Chief Scientific Advisor to the MoD, Dr. V.S. Arunachalam, was openly critical over Blackett's 'ruse' to retard the development of India's indigenous defence capability.

Inevitably, Blackett did encounter opposition within India, particularly from the armed forces, which is understandable and predictable considering his recommendations concerning non-competitive equipment, development before defence, indigenous production and reductions in defence expenditure. In effect, Blackett was attempting to downgrade the relative importance of the armed forces in favour of economic growth and his report left all three armed services with the need to protect a considerable amount of bureaucratic turf. Furthermore, all or most of the advice he gave cut against the grain of military professional interests which had been so successfully transferred from Britain to India but which, after 1947, required a prince's purse from a pauperised polity. Amongst his private papers there are signs that his attempts to

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23 Vishvanathan [1985].

24 NagChaudhri, conversations with the author (15 October 1984, Delhi).

rationalise defence policy met with stiff resistance from the service chiefs,

> "At my first meeting with the Defence Minister, I asked, as a starting point for my thinking ... to be told the military plans of the three armed forces ... The next day the Service chiefs produced their future plans. It only needed a short perusal of these documents to see that the total proposed packages of the three services nearly reached the total Indian Central Budget."[25]

Elsewhere in his papers there is a transcript of an interview given in Delhi. Over the course of the interview Blackett reiterated his reservations about the recommendations of the service chiefs,

> "I usually managed to speak to the Joint Chiefs of Staff meeting. But I am not of any official status in defence matters. I found it very interesting and I think it was useful getting to know a country which has got independence. You got certain advice from the old British advisors, which may or may not suit the occasion. Then there was very dangerous advice, it was hard to get objective advice and I had a lot to do ... I think I saved India a lot of money by discouraging her from some of the wilder ideas that the Chiefs of Staff had when I went there ...I once wrote a paper which was read, I was told, by new ministers coming in for the next ten years."[26]

Despite the 'wild' advice of the chiefs of staff, the Indian Cabinet did indeed take a decision in 1949 to adopt a narrow and circumspect defence policy with the defence of the North-West as a priority. The policy was based upon the assumption that, in the event of a war, Pakistan would have the initiative in launching an attack on Kashmir. In such a situation the Indian Army divisions in Kashmir would attempt to hold the attacking forces whilst the rest of the Indian Army advanced towards Lahore and Sialkot. A decisive defeat of the Pakistan Army, coupled with the occupation of Lahore, was considered sufficient to bring Pakistan to the negotiating table. At the

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25 Blackett, P.M.S., Blackett Papers G-29, (Royal Society Archives, London), p.3.

26 Transcript of P.M.S. Blackett radio interview, Blackett Papers G-12, (Royal Society Archives, London), pp.2-3.

diplomatic level, the Indian Government would work to prevent Pakistan from receiving war credits from external powers, which would enable it to continue fighting the war. If these efforts failed to halt the war, the Government would mobilise international support for a negotiated settlement.[27] No moves were made to make anything more than a token defence in the North East Frontier Agency (NEFA) against a potential threat from China - the diplomatic process was considered sufficient. However, it also occurred to Nehru that the logic of accepting that an exceptional threat from China existed would have demanded a very much more expensive defence policy[28]. In principle, therefore, early defence policy was the result of Nehru's attempts to contain defence expenditure and find a reasonable fit between India's defence and foreign policies.

Without doubt, the Blackett Report was a document of exceptional insight which could have been particularly useful to Indian defence policy makers and may have influenced early policy formation. Without losing sight of the central problem of defence, Blackett offered India a means to relative security which contained four important ingredients. First, the report emphasised the need for self-sufficiency. Second, the defence policy proposed was consistent with the foreign policy of non-alignment. Third, it would have been relatively cheap to implement. Fourth, the armed services would have been controlled, both politically and financially.

The policy adopted in 1949 was encouraging. Indian policy makers appeared to recognise that India was unable to fight anything like a

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27 Kavic [1967], p.37.

28 I am grateful to Lorne Kavic for this insight. Conversations with the author, Vancouver, July 1988.

major war, and they adopted instead a policy that was both sensible and affordable. Furthermore, through the stress upon negotiation and the exploitation of international opinion, there was a conscious attempt to link defence policy to foreign policy.

Nevertheless, it is axiomatic that policies do not succeed on paper alone; they require successful implementation. Although Nehru may have attempted to restrain the role of the military and cap defence expenditure, it is by no means clear that he succeeded. Nor is it clear that Nehru fully came to terms with the implications of the principles he valued. There is little disagreement as to the general direction of declared defence policy between 1947 and 1962. However, so far there has been no real attempt to investigate whether or not the Indian Government attempted to implement the policy described above, or succeeded in so doing. In order to understand this more clearly it is necessary to look closely at India's defence policy in practice, namely, the import and production of weapons systems based upon the defence missions which evolved during the 1947-62 period.

4.4 The Indian Army

As a result of the policy adopted soon after the attainment of independence, the Indian Army maintained its position as the focal point of defence. During this period over 75% of the defence budget was allocated to the Army but, at the same time, equipment modernisation was perfunctory due to the Government's unwillingness to expend limited foreign exchange reserves, which were stretched to the limit to pay for the modernisation of the other two services and for non-military requirements. Also, much of the Army budget was

given over to pay and pensions, which always account for a large proportion of the Indian Army's annual budget on account of the country's tradition of maintaining an extremely large standing army. Consequently, until 1962 the Army could only allocate 50% of its budget to capital expenditure.

In 1950 Nehru reduced the size of the Army by 50,000 men to approximately 300,000, in a bid to make economies and to simultaneously transform the Army into a mechanised rather than an infantry force. However, the places where the cuts were made scarcely amounted to anything of military significance, and a proposal to cut the Army by a further 100,000 men in 1951-52 was abandoned[29]. Nevertheless, despite the apparent wish for mechanisation, Army procurement during this period was relatively insignificant in terms of major weapons systems, but quite comprehensive in terms of stores and ammunition, which allowed adequate stockpiling for defence but not modernisation.

Given India's limited resources, the evolution of defence policy and posture should certainly have favoured the Army. At independence the country possessed a well organised and professional Army, by far the senior service. By contrast, the Navy and Air Force were both much smaller and younger. Under British rule, their roles were insignificant, particularly that of the Navy. In addition, there was a natural fit between what the Army could provide, what decision-makers felt they wanted from defence, the resources available for defence, and current threat perceptions. Without any serious change in organisation the Army could provide a defence against Pakistan based initially upon a relatively cheap and labour intensive form of

29 Kavic [1967], pp.84-85.

security. Increasing the material strength of the Army would not require excessive imports or major structural changes to the composition of the armed forces.

Between 1947 and 1958 India made little effort to acquire modern infantry weapons, the emphasis changed in 1958 when Krishna Menon took over the defence portfolio. The Army retained in service the mortars, artillery and howitzers from the Second World War and, for many years after 1947, the Enfield .303 rifle, a weapon of World War I vintage[30]. However, towards the late-1950s, after the scale of US military aid to Pakistan became evident, tank procurement increased, the most notable acquisition being the purchase of over 200 Centurion tanks from Britain between 1956 and 1957[31].

The somewhat mediocre fortunes of the Army should also be seen against the backdrop of three significant constitutional and governmental changes by which the Indian Government sought to limit the Army's power and authority. First, on the very first day of independence, the separate post of Commander-in-Chief was abolished and the title was given to the President of India, which transformed it into a largely ceremonial post. Ostensibly, this was to promote balance between the three services but the move was also intended to minimise a possible challenge to civilian authority from the senior and numerically stronger Army. Second, the Ministry of Defence became civil service dominated and thereafter expanded its capacity

30 SIPRI [1971], p.475.

31 Evidence of tank purchases differs considerably. According to SIPRI India bought 180 Sherman, 210 Centurion and 40 AMX-13 tanks but according to Kavic the figures are 30, 200 and 150 respectively.

to control information and make decisions on military matters[32]. Third, for several years after independence the Government gradually changed the Warrant of Precedence which substantially reduced the Army's prestige and its pay, and further emphasised the principle and practice of civilian control.[33]

4.5 The Indian Air Force

The 1949 policy guidelines adopted by the Cabinet (see p.167) dictated that the Army become the pivotal service, with the Air Force and Navy ascribed little more than a supporting role. However, between 1948 and 1956, the Indian Air Force (IAF) received, by any standards, sufficient hardware to constitute an independent build-up, far beyond the role of support alone. Starting with 100 Spitfires and Tempests in 1948, the IAF took delivery of an unspecified number of De Haviland Vampire F.3 fighters in late 1948, 52 Vampire F.B.9's and Vampire N.F.54's in 1949-50 and 71 French Dassault MD-450 Ouragan fighter-bombers in 1953-54[34]. Following a decision in principle on 1

32 The civilian control of the MoD also harks back to the famous dispute between Kitchener and Curzon in the nineteenth century. Cohen p.??

33 Cohen [1971], pp.171-3.

34 When matched against Pakistani procurement prior to the aid agreement with the US, the acquisition of the Ouragan may seem profligate, particularly so many units. However, correspondence between high ranking members of the British Air Ministry in 1952 provides a possible explanation: "... I am led to believe that the Indian Air Force will do its best to convince their Government that the French product is the better bet. Behind their conviction is the thought that the Ouragan can be made readily available to them in the numbers they require, and also the desire not to place all their orders for aircraft in a single country. ... The Indians are of course looking for their "top cover". They are quite happy with the Vampires as ground attack aircraft and also as day interceptors of piston engined opposition, but they are also conscious of the unbalanced nature of this fighter force and want an aeroplane that can tackle a really high level opponent whether he be a bomber or a top

April 1956 to procure the English Electric Canberra, ten months later the Government ordered 54 B(1).58 light bombers, eight P.R.57 photoreconnaissance aircraft and six T.4 dual-control trainers. Deliveries began in the early summer of 1957. The inventory of Canberras was further increased by 20-30 units in 1961/62. In mid-1955, the Government was considering the purchase of 80 Dassault Mystere IVA interceptors or the licensed production of the British Folland-Gnat. At a later date the Government placed orders for another 33 Dassault Ouragans, superseded its earlier Ouragans with 110 Mysteres and extended negotiations with Folland for the Gnat, which eventually went into production. As the IAF was taking delivery of these French aircraft in mid-1957, and HAL was beginning production of the Gnat in Bangalore, the Government ordered 160 Hawker Hunter Mk.56 FGAs (ground attack fighters) and 22 Mk.66 trainers from Britain.[35]

These procurement details seem to reflect a departure from the policy adopted in 1949 in which the Cabinet essentially committed India to a defence policy based upon a strong Army and relatively little else. It is not possible to detect much of Blackett's influence here either. To all intents and purposes, the IAF became henceforth an independent service with a role that exceeded support. By the late-1950s the IAF, through the procurement of the Canberra, had a strategic bombing role vis à vis Pakistan[36]. Moreover, with regard

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screen. **As they spend most of their time looking over the fence at Pakistan, I would imagine they are not thinking in terms of any very large numbers, but have perhaps heard of UK offers of the Canberra to Pakistan."** [emphasis added] Public Records Office, London, Ref: 371/1011211 110720.

35 Kavic [1967], pp.102-104.

36 Although the rate of technological change over the past three decades makes comparison difficult, it was the equivalent of India purchasing the Tornado Multi-Role Combat Aircraft in 1983.

to Vampires, all the models procured by the IAF had only recently entered service with the RAF in Britain. For example, the Vampire F.3, a tropicalised version of the F.B.5, was developed by Britain for deployment in the Far East. Although India purchased the system between 1949 and 1950, it did not enter RAF service in the Far East until January 1952. Much the same is true of the Canberra (See Table 4.1). Furthermore, the relative capability of the Canberra should not be overlooked. In its time it was considered a remarkable aircraft, capable of extremely high altitudes and, during the period in question, it was an extremely advanced weapons system[37].

The rate of aircraft procurement either represents an astounding institutional victory for the IAF throughout the 1950s, or a significant policy change on the part of the Government during the implementation process. Certainly, procurement details suggest that neither Blackett's recommendations nor the policy guidelines adopted in 1949 were followed with any great enthusiasm, even though the practical problems associated with competitive and non-competitive weapons are most pronounced in the field of aeronautics, which was in a rapid state of evolution during this period. The fact remains that the Air Force managed to ensure that all or most of the weapons systems it required were forthcoming even before the ascendancy of Krishna Menon, the Defence Minister renowned for his support of the IAF. So too did the expansion precede the consolidation of the US-Pakistan military aid agreement, even though Indian intelligence sources may have anticipated such an agreement several years earlier. IAF procurement signified a widening gap between public defence policy and actual defence posture.

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37 The Canberra was later adapted by the US for extremely high altitude photo-reconnaissance in the form of the famous U-2.

Table 4.1: Selected Indian Air Force and Royal Air Force Procurement 1946-1961

Make/Model	RAF front-line service/ squadron service (a)	Withdrawn RAF	Procured IAF
Tempest IV (tropical version?)	December 1946	March 1950	1948
Vampire F-3	FL service - April 1947; sq. service - 1948; Cyprus - 1949	1952	April 1948
Vampire F.B9 (tropical versions of F.B5 in service from 1949/50)	FL service - Nov 1951 (Malta)	FL service - 1956 (remained in 2nd line until 1960/61)	1949/50
Vampire NF.54 (export version of NF.10 (b)	July 1951	1954	IAF received 15 units in 1957-59
Canberra B(1)-58 (c) (export version of B(1).8	May 1961 (Germany)	June 1972	July 1955 - late-1956 (d)

(a) For training purposes the date of squadron service if about six months later than the date of front-line services.

(b) The NF-24 was a private venture intended for the export market. An arms export ban in 1950/51 prevented the sale of NF-24s to Egypt. Instead the units were taken by the RAF as an interim measure due to production delays on other versions of night fighter.

(c) A central mission for the B(1).8 was low level nuclear strike.

(d) One Canberra was exported to India directly from the first production batch, the thirteenth from an initial batch of thirty. Between August 1956 and September 1958, sixteen units reached India directly, the bulk arriving in late 1956.

Source: Armament and Disarmament Information Unit resource base.

4.6 The Indian Navy

At independence the Indian Navy was a meagre force comprising thirty-two obsolete vessels primarily intended for coastal patrol, including four sloops, two frigates, one corvette and twelve minesweepers - nothing of any great worth[38]. In addition, for reasons which are unclear, the British had tended to recruit primarily Punjabi Muslims into the lower ranks of the Navy, who went to Pakistan in 1947. This left India with a very small number of ratings after partition.[39]

Initially, Britain attempted to persuade India to build up a Navy which could integrate itself into a larger force based upon the Commonwealth navies. However, Indian decision makers were adamant that India should control a strong and independent Navy commensurate with the country's size, the long coast-line, geo-political location and potential wealth. As a result, the Indian Government laid down plans for a strategic role for the Indian Navy after 1947. In response to a Government directive in late-1947, before Blackett arrived on the scene, the Indian Naval Headquarters drew up a ten year plan of naval expansion under the direction of Vice-Admiral Parry, seconded from the Royal Navy.[40] The proposed programme envisaged the development of a carrier force comprising two light fleet aircraft carriers, three light cruisers, eight to nine destroyers and the necessary support vessels. If implemented this programme would have represented a quantum increase in naval capability.

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38 Larus [1978], p.1.

39 Kathari [1982], p.62.

40 Kavic [1967], p.117.

The expansion programme commenced in 1948 and within two years a light cruiser and three 'R'-class destroyers had been purchased from Britain. A Directorate of Naval Aviation was also formed in 1948 with a remit to develop plans for a fleet air arm. The procurement of two aircraft carriers from Britain was planned for 1955 and 1957, by which time India would also have obtained 300 modern naval fighters, fighter-bombers and anti-submarine aircraft. In the event, the programme was severely affected by the uncertain market conditions stemming from the Korean War, the formation of NATO and the ensuing rise in domestic demand amongst the major defence exporters. In particular, the British were unable to commit themselves to a sales package of this magnitude; during this period Britain was India's main and preferred source of defence equipment, particularly for the Navy. However, the situation then was somewhat different from what it is during the present era. Immediately after the end of the Second World War Britain had very little surplus capacity in the defence sector and the sale of equipment to countries such as India and Pakistan often involved juggling between the needs of the domestic forces and overseas customers; latterly Britain has become much more reliant upon the Third World export market and is often prepared to meet requests from overseas buyers before its own armed forces have acquired all the units on order. Meanwhile, the Indian Government reconsidered the naval programme and concluded that it was beyond the country's means, irrespective of supply shortfalls. Nevertheless, new plans for a small carrier force were drawn up in 1949 and revealed in January 1950. The scheme was marginally revised in 1953 resulting in decisions to purchase a fleet replenishment vessel from Italy and to borrow three ex-escort destroyers of the Hunt Type-2 class from Britain. In addition, a light cruiser and two

inshore minesweepers were also purchased from Britain in 1954 and 1955.

As part of the expansion plan, a six-year naval programme was revealed in 1955 with the purchased vessels to be built in British shipyards. Actual procurement was cut back significantly due to a foreign exchange shortage in 1957-58 which followed a balance of payments crisis which amounted to deficits which reached $650 million. However, the financial crisis did not prevent the purchase of the British light fleet carrier, Hercules, in 1957 and its modernisation in Belfast or the purchase of Sea Hawks and Alizes aircraft for the fleet air arm. The carrier, renamed the INS Vikrant, was bought from Britain in January 1957, commissioned in March 1961 and received its full complement of naval aircraft five months later.[41]

In the case of the Indian Navy the situation is relatively clear. Both Government and the services intended India to have a blue water Navy with an ability to operate in the ocean reaches to the South, East and West. However, a lack of foreign exchange coupled with the non-availability of British vessels for purchase prevented the immediate attainment of such a capability. Because of financial stringency, the Navy had to be the first casualty despite Blackett's recommendations for significant expansion; the bottom line on defence policy was an adequate land-air based defence against Pakistan, and the naval role in such a posture was limited. In the event of a war with Pakistan the Navy was responsible for bottling up the Pakistan Navy in Karachi harbour and to a lesser extent at Chittagong.

41 Kavic [1967], pp.116-125.

Nevertheless, it is somewhat misleading to describe the Navy as India's 'forgotten service'[42], even though it received very small budgetary allocations during this period - a mere 4.7% of the total defence budget and 13.3% of capital expenditure, even in the 1962-63 budget (both the Army and Air Force received over 40% of capital expenditure, which was under 10% of the entire defence budget)[43]. The reason for this apparent 'forgetfulness' was that India could always have turned to Britain in the event of a pronounced security threat from the Indian Ocean. During this period the Indian Ocean was still a 'British lake' - Britain had not yet withdrawn from East of Suez.

4.7 Actors and Institutions: The Dynamics of Defence Policy

The evolution of defence policy in the years following the attainment of independence is so confusing as to beg the question as to whether there was any policy at all. From the information available and presented here it would appear that Nehru's well documented wish to restrain defence expenditures was ignored, both directly and indirectly, despite the 1949 policy directives which came from the Cabinet. The resources committed to the Indian Army were broadly in line with Nehru's defence policy and also the recommendations of Blackett. However, the arrangements made for the other two services, notably the speed and scale of procurement, connote the adoption of far reaching missions. This suggests that either Nehru had much less control over defence policy than is generally accepted or, alternatively, that, under pressure from the service chiefs, he

42 Larus [1978].

43 Thomas [1978], Table 4, p.147.

willingly acquiesced to what amounted to a significant deviation from declared policy.

Although the allocations to the Navy were low during the first two decades of independence, there was a firm intention on the part of the key decision makers to build up a strong naval presence in the Indian Ocean. It is clear that the naval programme was restrained through necessity rather than choice; the Indian economy was not growing at a particularly rapid rate during the period in question. But for the domestic foreign exchange crisis and the contraction of supply on account of the Korean War, the naval programme could well have been more dynamic. Even so, the acquisition of an aircraft carrier, light cruisers and a fleet air arm less than fifteen years after independence amounts to something considerably different to neglect.

The development of the Indian Air Force is even more at variance with declared policy. According to the Cabinet's policy guidelines adopted in 1949 and not changed subsequently, the task of the Air Force was primarily to support the Army in the event of a land war against Pakistan. The Chief of Air Staff affirmed this in the aftermath of the 1965 war,

> "The task of the Air Force is to give effective support to [the] Army, and during the 1965 operations we were able largely to achieve that".[44]

However, the procurement of defence equipment suggests otherwise. The Canberra and the Hunter, for example, had little to do with either supporting the Army or countering the acquisitions of Pakistan, even after the signing of the 1954 military assistance pact with the United States; either they were designed for missions which

44 Thomas [1978], p.176.

were not included in declared policy or they were purchased for national prestige[45]. Furthermore, the Air Force may have been used primarily to support the Army during the 1965 war but it is important to differentiate between the complete spectrum of activities and options at the disposal of an armed service, and its activities in a specific conflict. For example, during the Vietnam war the US Air Force did not use nuclear weapons, but there was no suggestion of the USAF losing its position within the strategic triad. Much the same can be said of the Royal Navy task force during the Falklands/Malvinas conflict.

With both the Navy and the Air Force it is more important to understand their institutional development in terms of missions, rather than to look exclusively at procurement and expenditure. In particular, the deliberate or almost casual development of both a blue water navy and a strategic bombing mission imply that both the Air Force and the Navy fared much better in their mission-directed institutional development than is traditionally assumed. Once missions have been established they are relinquished or reversed with extreme reluctance; they invariably reflect or reinforce either key tenets of foreign policy, major perceptions of threat or institutional interests, both military and civilian[46]. Furthermore, once a mission has been established it must be followed by procurement. Otherwise, by definition, a country is not adequately defended.

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45 SIPRI [1971], p.475.

46 The development of a nuclear weapon option may be said to reflect a civilian rather than a military predilection. The Indian armed forces have been traditionally cautious of the nuclear option, possibly because in time of war decision making will become much more of a political rather than a military process.

Unlike the situation in the United States, for example, it is difficult to define with documented precision the contours of decision making and bureaucratic infighting which during this period, led to the departure from declared policy. (Whether one policy replaced another is debatable but certainly defence posture changed significantly.) This is due to the considerable amount of secrecy which surrounds issues relating to defence within India and the unusually small number of actors involved - for a decade Nehru and Menon had primary control over both defence and the foreign affairs; the defence portfolio was invariably given to junior ranking cabinet ministers and was not considered a prestigious post. Cabinet debate on key issues was lacking. This was in part due to Nehru's style of government but also because of the closed nature of the debate, compounded by legislative ignorance.

From an examination of the rate of procurement by the Indian armed forces and the abiding sense of equivocation which emerges when defence policy during the period in question is placed under the microscope, it appears that the received wisdom is significantly misinformed. Much of the evidence and many of the relevant policy moves have been misread: India did not proceed along a defence path characterised by policy restraint nor does it seem that defence policy was sufficiently well linked at the conceptual level to foreign policy, witness the fate of Blackett's recommendations. The armed forces may have been demoted in relation to their civilian peers but, when resources permitted, they received the equipment they wanted.

How then can this period be understood? The evidence points persuasively if not conclusively to a defence policy which drifted rather than evolved. However, although it is not clear why this happened, there are four possible explanations for understanding India's defence policy between 1947 and 1962.

The first explanation is that the decision making process tilted in favour of the long term ambitions of the Indian élites. They believed that India was destined to become a nation of considerable power and influence in both South Asia and the Indian Ocean. This influenced the defence thinking of those who made and implemented policy from the outset, and caused them to lay the foundations for a blue water Navy and a land-air strength of impressive proportions. The continuing ambiguity of policy on nuclear weapons, both before and since independence, reflects well the duality of defence policy, as does the rate of Naval and Air Force procurement after 1947. In particular, the procurement of both an aircraft carrier task force and strategic bomber squadrons indicate that defence policy reflected a more ambitious and comprehensive defence posture than Nehru had led both the Indian nation and the rest of the world to believe. Thus, in tandem with other influential policy and opinion shapers, Nehru the international statesman, Gandhian and democratic socialist may have harboured a very different agenda for his country from the one he publicly avowed.

The second possibility is that Nehru may not have understood or recognised the growing drift in defence policy. It is well known that Nehru was impatient with policy detail even though he exercised considerable control over the foreign and defence portfolios. His excessive workload, the overall diversity of the problems he elected

to confront, international, regional and domestic, may have permitted a situation in which an alternative defence policy could emerge. In addition, Nehru harboured a pious objection to becoming involved in the workings of defence and was well-known for his general impatience with the minutiae of policy which led him to leave policy implementation to others. However, there is no evidence that Nehru's ministers and gatekeepers were in any way disloyal. Krishna Menon may have upset the armed forces during his period of tenure as Defence Minister, and he may also have misjudged the 'forward policy' against China, but he adhered broadly to declared policy. Within that he was committed to increasing the efficiency of professional leadership amongst the armed forces; this led to the famous dispute with General Thimayya over promotions. Second, he was committed to increasing India's capacity to produce indigenous defence equipment. Both missions sat comfortably with declared defence policy, though the impetus on Menon's part may have stemmed from his more narrow political ambition.

Nor is there any evidence to suggest that the professional bureaucrats in the MoD were intent on subverting the policy laid down by Nehru. Blackett appeared not to find antagonism to Nehru's directive amongst the members of the MoD he encountered. Obversely, the service chiefs were less enamoured with the attitudes of the bureaucrats, witness the complaints of the first Chief of the Navy Staff,

> " ... wise counsel ... helped me to exercise restraint in periods of frustration. These frustrations arose chiefly from the bureaucratic machinery. Bureaucrats fall into two categories. There were those who knew all about everything, including operational and technical matters, and those particularly of the Finance Ministry, who did not seem to care what harm they did to the service so long as they saved money for the exchequer. There was a third neuter group whose effective contribution was minimal. The basic fault lay in the

> system of functioning of the ministry whose officials played no part in the initial formulation of plans, thus depriving themselves of the opportunity to appreciate both the professional considerations and requirements as well as financial and practical limitations that are involved in any proposal. They preferred to remain the ultimate arbiter.[47]

A third possibility is that the three Chiefs of Staff were the key to the yawning gap between formulated policy and its implementation. The Chiefs of Staff's opposition to the Blackett approach has already been considered. Is it possible that the authority of these actors extended to redefining the policy of Nehru, the key architect of defence policy? Here it is necessary to consider the way in which policy decisions were formulated between 1947 and 1962.

Immediately after independence a number of committees were set up to advise the Government and the defence minister on defence problems, particularly in relation to Pakistan. The structure comprised the Defence Committee of the Cabinet which was underpinned by a series of other committees, of which the most important were the Defence Minister's Committee, the Chiefs of Staff Committee, the Joint Intelligence Committee and the Joint Planning Committee. The Defence Committee comprised the Prime Minister, the Defence Minister, Foreign Minister, the Finance Minister and other important Cabinet ministers. On all the other committees designed to underpin the Defence Committee of the Cabinet sat members of the armed forces ranging from the Chiefs of Staff (Defence Minister's Committee, Chiefs of Staff Committee, Joint Planning Committee) to the Directors of Intelligence of the three services and the representatives of the Chiefs of Staff.[48] Consequently, at the formal decision making level, the

47 Kathari [1982], p.63.

48 Rao [1970], pp.307-308.

Chiefs of Staff constituted a ubiquitous presence either directly or by proxy. In practice, Nehru would have been constantly bombarded by the views of the service chiefs during policy planning sessions. Moreover, not only were non-military views in the minority but, because of poor technical and operational knowledge, they were probably less persuasive as well,

> "In the opinion of H.M Patel, a former Defence Secretary, the policy organisation of the Defence Ministry was 'sufficiently flexible to ensure that every relevant point of view has a chance of being presented at appropriate level if necessary'. The theory is rarely if ever translated in practice, however ... The ability of the average civilian official to make such decisions ... must be judged against Patel's own admission that the ignorance of civilian officials (to which may properly be added that of the politicians) is so complete as to be a self-evident and incontrovertible fact."[49]

Before independence, the commander-in-chief was also the War Member on the Governor-General's Executive Council. Because of this, all proposals requiring decisions were sent first to the Military Finance Department. If the proposal was accepted the file was sent to the Defence Department for implementation. Under this system, the armed forces took whatever decisions they could and saw no need to consult the Defence Department.

Obviously, this situation was clearly untenable after 1947, particularly as the three service chiefs were under the control of the Defence Minister who needed to know a great deal about what was going on. In 1949, over the course of the defence review, new rules governing decision making were brought in. Thus, a list of the most important areas of decision making was drawn up and the Service Headquarters were instructed to send anything relating to this list to the MoD in the first instance. The Ministry would then examine

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49 Kavic [1967], p.217.

the request from all the relevant angles and any differences of opinion were taken up in meetings.

Nevertheless, although the MoD slowly built for itself a base of expertise and knowledge, it could not acquire the required skills quickly enough to confront the armed forces on equal terms. Moreover, in 1958, Krishna Menon reversed the new procedures and gave the power of decision making back to the service chiefs. Thus, at the Secretariat level, the MoD became little more than a post office and the ministry itself became a much less attractive area of the bureaucracy in which to work.[50]

The initial system of decision making was set up by Lord Ismay, an adviser to Mountbatten. However, over time the formal committee structure disintegrated: the Defence Committee, the Chiefs of Staff Committee and the Intelligence Committee were effectively telescoped into one and decisions were increasingly considered on an ad hoc basis by the Prime Minister, the Defence Minister, the Chief of Army Staff and some senior Army officers[51]. For example, in January 1948, prior to leaving for Washington to take up the task of advising Sir Gopalaswamy Ayyangar, the leader of the Indian delegation to the UN Security Council concerned with the Kashmir dispute, B.M. Kaul, then a low-ranking military officer, was called to Nehru's residence. Referring to a recent discussion between Air Vice Marshall Mukerji and himself, Nehru asked Kaul to explore the possibility of purchasing the Mitchell bomber whilst in the USA. Kaul did so but his request was eventually turned down primarily because of the unorthodox approach, but also because of the failure of the Indian

50 Venkateswaran [1984].

51 Rao [1970], p.309.

Government to inform either the US State Department or the British Government as the customary supplier of defence equipment to India.[52] Such an informal method of decision making would have further excluded non-military decision-makers.

It is also necessary to consider the possibility that the level of military ignorance on the part of both Government and bureaucracy may have allowed the armed forces to get their way through incremental changes. It is true that only the armed forces were able to link defence policy to technological needs. However, the notion that the armed forces conspired against their civilian counterparts for enhanced allocations or unnecessary equipment contradicts all that is known about both sides. Moreover, Nehru was the shrewdest of politicians and it is extremely unlikely that his political instinct would have permitted defence policy to develop in a direction which he did not approve. Finally, the nature of the ad hoc policy making machinery described above, suggests that the Army would have fared much better if it had enjoyed undue influence during this era. The logical conclusion is that the increased strength of the armed forces came about with Nehru's approval.

Fourth, it is conceivable that defence policy went through several redefinitions as a result of the strained relations with Pakistan over Kashmir and, in addition, the establishment of a bilateral economic and military aid agreement between the United States and Pakistan. Despite Nehru's attempt to isolate his country from the impact of the Cold War and the inevitable domestic consequences, he was unsuccessful for reasons over which he had little or no control.

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52 Kaul [1967], pp.97-98.

During the early 1950s the United States pursued a collective security policy based upon the creation of an interlocking series of alliances designed to hem in the Soviet Union and prevent communist expansionism (See Chapter One). Pakistan became a member of the Baghdad Pact in September 1955 and later that year joined SEATO. Although talk of arms transfers had been in the air for several years, when the agreement was struck Pakistan concentrated upon using the aid to create a multi-service capability to resist external attack, from India in particular[53]. Consequently, the Government of Pakistan paid special attention to the development of the Pakistan Air Force through the acquisition of the F-86 Sabre, the B-57 Canberra and the F-104, equipped with Sidewinder air-to-air missiles. The Army received heavy artillery, Patton and M-24, M-4 and M-41 tanks.

The motivation on the part of Pakistan was undoubtedly to counter India's growing military strength and the gradual erosion of the only advantage Pakistan enjoyed, that of superior firepower. Moreover, Pakistan was convinced that Britain favoured India when it came to deliberations concerning arms transfers and the military balance. Thus, if Pakistan was to continue to dispute Kashmir it had to find economic and military-political aid from somewhere. In the event it somewhat reluctantly pandered to Secretary of State Dulles' policies opposing Soviet expansionism. Nor did the aid arrive without conditions: Pakistan was compelled to offer its airfields as an alternative escape route for US spy planes flying over the Soviet Union, and to permit the construction at Peshawar of a communications base which became an important intelligence centre.

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53 SIPRI [1971], p.494.

Nevertheless, there are however four important points to recognise concerning the effect upon India of US aid to Pakistan. First, although it did have an impact upon India's security perspective, its defence policy and posture was not fundamentally altered. India's rearmament programme was well in motion before the mid-1950s, and the argument that there was an 'action-reaction' process which compelled India to change its defence policy has been overstated. Second, the 'action-reaction' cycle can act both ways, and it is more likely that Pakistan's decision to seek military and economic aid was a reaction to the erosion of its firepower capability vis à vis India. As Table 4.2 and Figure 4.1 indicate, India appears to have been intent on seeking a significant advantage well before the aid agreement was signed. Many but not all of the acquisitions which arrived after 1955 were both planned and/or ordered well before. Moreover, although the records are both poor and patchy, it would seem that India consistently outspent Pakistan on defence by an approximate factor of three. Third, despite reservations about India's non-aligned foreign policy, the United States also provided small quantities of defence equipment to India in the mid-1950s. This of course implies that in the event of renewed fighting between India and Pakistan, problems would occur for US policy makers over which side to support. This is precisely what happened in 1965. The US embargoed both sides thereby making a victory for Pakistan remote if not impossible.

If during this period there was a distinct gap between India's declared defence policy and its actual posture, this would suggest that India should have been spending considerable quantities of precious foreign exchange on defence, particularly as India received virtually no military aid during this period. However, in absolute

	India Mil Ex[a]	Pakistan Mil Ex[b]	Indian Air Force	Pakistan Air Force	Indian Army	Pakistan Army	Indian Navy	Pakistan Navy
1948	-	-	100 Spitfire & Tempest (fighters) ? de Haviland Vampires F3 (fighters)					
1949	-	-	52 Vampire F.B9 & NF-54 (fighter)	10 Sea Fury (fighter)			3 "R" class destroyers	
1950	-	-						1 "O" class destroyer
1951	2501.0000	-		36 Vickers Attacker (bomber)				
1952	2054.0000	-						
1953	2138.0000	-	71 MD-450 Ouragan (fighter bomber)		180/30 Sherman M-4[c]		3 "Hunt" Class Escort destroyer	
1954	2163.0000	-	10 Vampire NF-54 (fighter bomber)			? M-24 Chaffee 200 M-4 Sherman 50 M41 Bulldog		
1955	2137.0000	-						
US Aid to Pakistan commences								
1956	2321.0000	-	50 Vampire T.55 8 Seahawk (fighter)	120 NA F-86 (fighter)	210 Centurion			2"Battle"class destroyers 1 "Dido" class light cruiser
1957	2832.0000	-	182 Hawker Hunter F.56 & T.66 (fighter) 33 MD450 Ouragan		40 AMX-13		1 "Colony" class cruiser	
1958	3106.0000	952.0000	74 Canberra B (1) 58 & PR 57 (bombers/recce)	32 Martin Canberra B-57/B & RB-57		460 M-47 & M-48 Patton[d]	1 "Leopard" class anti-aircraft frigate	4 CV & CH class destroyers
1959	3065.0000	1063.0000	110 Mystere IVA (interceptor)					
1960	3225.0000	1210.0000	100 Folland Gnat (fighter)			M-113	2 "Whitby" Class Anti-submarine frigate	
1961	3545.0000	1208.0000					1 "Majestic" class aircraft carrier	
1962				14 F-104A & F-104B Star-fighter (fighter)				

[a] Fiscal year starts 1st April

[b] Fiscal year starts 1st July

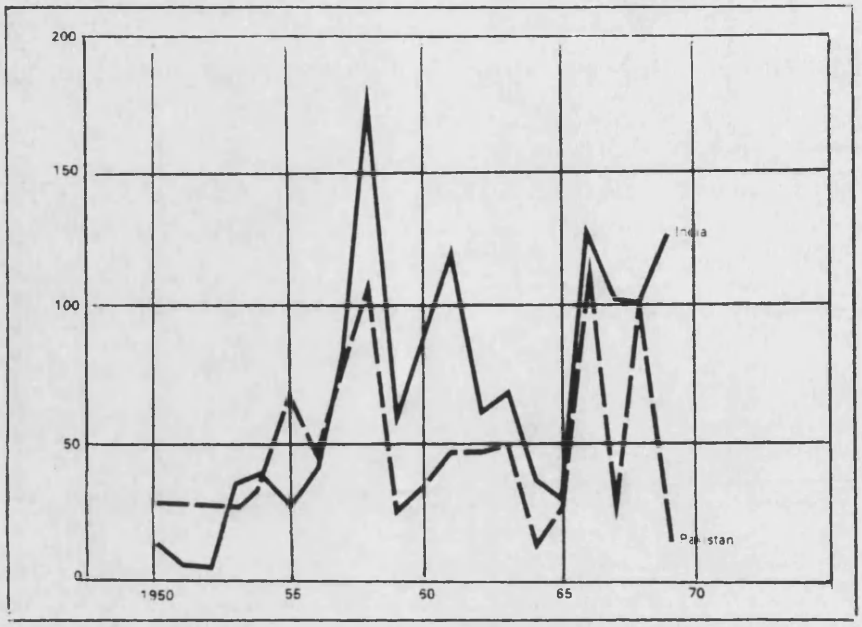
[c] Figures differ, see footnote no.

[d] Delivered between 1955 and 1960

Sources: Kavic, SIPRI worksheets

Figure 4.1: Comparison of the Rise and Fall in Major Weapon Supplies to India and Pakistan[a]

Index numbers, 1968 = 100

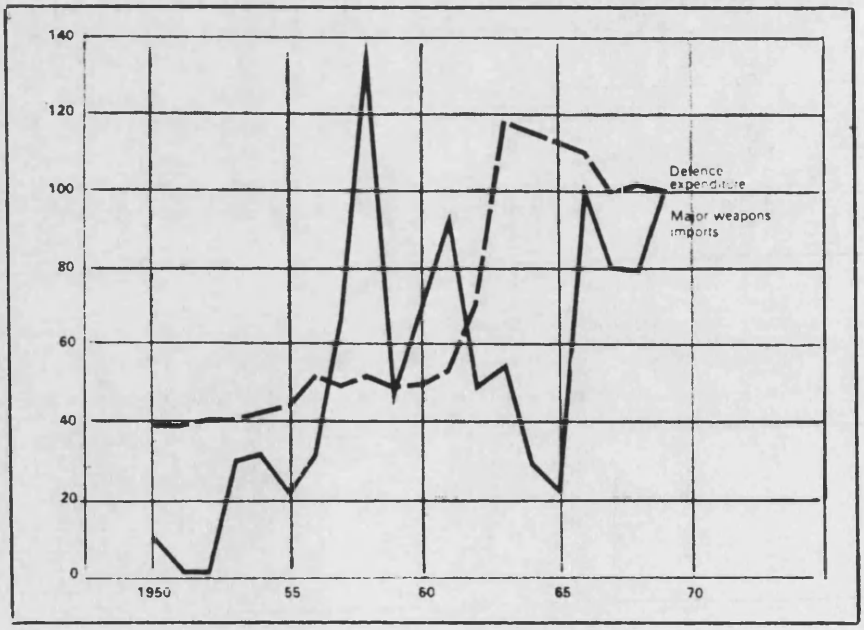


[a] Total major weapon imports to India in the period 1950–1969 were $2 000 million. Total major weapon imports to Pakistan in the period were $ 500 million.

Source: SIPRI 1971, Chart 16.2, p.472.

Figure 4.2: Comparison of the Rise and Fall in Major Weapon Supplies and Defence Expenditure in Indiaa

Index numbers, 1969 = 100



[a] Total Indian defence expenditure in the period 1950–1969 was $16 355 million (at 1960 prices and exchange rates). Total major weapon imports were $2 007 million.

Source: SIPRI 1971, Chart 16.3, p.473.

terms and as a proportion of GNP, defence expenditure was low, although the defence burden as a percentage of central government expenditure was high; in 1950 the Government allocated 29% of current expenditure to defence[54]. The costs in terms of foreign exchange have been estimated at approximately US$50 million in 1950, rising to US$210 million in 1959[55].

However, in the immediate post-war period, India did not need to draw on its foreign exchange reserves, as it obtained most of its defence equipment from Britain. It was able to pay for much of its defence equipment by drawing heavily on the sterling balances representing the debts incurred by Britain during the Second World War when many of the latter's costs in India were paid in rupees. This was an extremely useful situation for India as the British Prime Minister, Winston Churchill, recognised when he alluded to the dilemma it posed for Britain in a memorandum circulated to his Cabinet,

> "It must be remembered that these two countries [India and Pakistan] may go to War with one another and that is the only object for which they seek arms. Unfair balance was shown to India in the arrangements made at the time of partition and the balance might be slightly redressed in favour of Pakistan. On the other hand we place ourselves in a very questionable position of arming both sides with no other object than long-term advantages of keeping up the United Kingdom manufacturing potentials. For instance, forty-two bombers for Pakistan raises the query "who are they going to bomb?" Obviously the cities of India. This involves us in serious responsibility. We are like an arms merchant supplying both sides in a possibly impending struggle. There is of course this difference that we do not get paid anything. All that happens is that the amounts are marked off the so-called 'sterling balances' ... A refusal to continue supplies would not prevent them from obtaining at any rate some of their requirements from elsewhere. This would almost certainly be from outside the sterling area and would

54 Kavic [1967], Appendix I.

55 Terhal [1982], Table I.

> thus impose a further strain on the foreign currency reserves of the sterling area as a whole."[56]

Thus, the real cost of growth in the defence sector was largely hidden. The gap between procurement and expenditure is further borne out by Figure 4.2. As procurement increased dramatically between 1956-57 defence expenditure remained relatively constant and did not rise significantly until after the Sino-Indian war of 1962.

Based upon the evidence it is possible to conclude that India had embarked upon a significant defence build up well before both the establishment of the US-Pakistan military aid programme and the 1962 war. The background to this policy can be examined from three angles[57].

First, it is inconceivable that Nehru was unaware of the defence build-up. More likely the duality of defence policy during this period stems from the inherent contradiction between Nehru the idealist, international statesman, pacifist/Gandhian and democratic socialist, and Nehru the realist and leader of a large, newly-independent country with the potential for real international power and significance. Although by instinct Nehru preferred to use political power and diplomacy rather than force, he may also have realised that a shallow defence capability would severely compromise India's future greatness. In addition, many of the hopes for regional stability were disappointed and from the 'First Round' onwards India sought at least to match and in the event greatly

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56 Supply of Arms to India and Pakistan, (Memo from Prime Minister Winston Churchill to Cabinet, CAB 129/49, Public Records Office, London).

57 I am grateful to Lorne Kavic for his comments on this part of the analysis. Conversations with the author 26 July 1988, Vancouver.

exceeded the military capability of Pakistan. Yet, at the same time, Nehru had to be seen to be placing maximum emphasis upon economic and social development, which ruled out expenditures and investments for future international power. The confused defence policy which emerged was a tortuous attempt to find a fit between the present and the future, the domestic and the foreign, and the regional and international influences bearing upon the Prime Minister, who himself was torn between idealist aims and realist instincts.

Second, the role of the armed forces should not be underestimated. Although they were weakened in relative terms after Independence they still managed to score many institutional successes. This was in part because they controlled the monopoly over the information and knowledge required to link policy, strategy and technology. It was also because of their steadfast refusal to break conceptually with the Sandhurst legacy; as soldiers schooled in the British tradition they clung tenaciously to the European/Western way of defence despite the costs and dependency which such a process entailed. Or, put another way, they were clever enough to offer no attempt to assist Nehru with the design of a defence policy which would have reflected the key tenets of non-alignment and would have built upon the ideas put forward by Blackett. They just ignored the contradictions between actual and declared defence policy and readily accepted the considerable rewards of a confused defence policy.

Finally, despite Nehru's best intentions, policy making and implementation were a ramshackle process and remain so to this day. Although the need to deter further threats from Pakistan in Kashmir was accepted by all concerned, the lack of debate, discussion and clear thinking resulted in a confused policy based upon a covert

acceptance of realism on the one hand, and the occasional genuflection to idealism on the other. Nehru may have been too preoccupied to orchestrate and follow through a debate amongst experts, while the armed forces stuck rigidly to their traditionalist views, which eventually prevailed. As it became clear that procurement reflected a slow and moderate growth towards eventual great power status, with all the attendant regional and economic ramifications, the armed forces were content to profit from the drift which others were ill-equipped to halt. Thus, although all agreed that the country had to purchase enough to retain an edge over Pakistan, only the armed forces could differentiate precisely between adequacy and excess. As with other countries the 'how much is enough' problem proved to be an insoluble dilemma for policy makers because the policy process never squarely investigated, debated or rationalised the moves required to deter both Pakistan and to retain the key tenets of Nehru's idealism.

CHAPTER FIVE

FROM HUMILIATION TO REGIONAL HEGEMONY - THE MATURING OF DEFENCE POLICY: 1962-1980

5.1 Conventional Defence

5.1.1 The Sino-Indian War of 1962

The 1962 Sino-Indian war was both a surprise and a disaster for India and the ramifications were numerous and far reaching. Nehru and his advisers had placed little emphasis upon the threat to NEFA (the North East Frontier Agency, now renamed Arunachal Pradesh). As suggested in the previous chapter, this may have been in part because to recognise China as a threat to India's security would have involved the State in a much more significant defence effort than was deemed expedient or affordable, over and above the arrangements which had already been made for defence in the North West. Secondly, Nehru's idealism and the importance of China to the non-aligned movement urged that the two Asian giants should be seen to be on the best possible terms. Consequently, India's policy towards China was invariably forgiving and, wherever possible, Nehru attempted to find foreign policy solutions to bi-lateral problems, even though his policy led on several occasions to loss of face. For example, Nehru was relatively weak over the independent status of Tibet and little protest was made over the several references to Nehru in Chinese political writings as an 'imperialist running dog' and a 'member of

the political garbage group in Asia'[1]. However, when relations with China eventually became excessively strained the Government's reaction was one of indecision and prevarication.

The drift towards war began in 1960 when the Chinese made limited advances into areas around Ladakh. Neither the Nationalist Chinese Government under Chiang Kai-shek nor the Communist Government which replaced it were prepared to accept the status quo. Each served notice on India that China would challenge the legitimacy of the McMahon Line, the border between Tibet and India which had been recognised by both parties in 1913-14. Both Chinese Governments had committed themselves to the restoration of China's former historical power. To this Mao Zedong added his own particular revolutionary perspective. Whilst the Indian Government was relatively complacent regarding the aggression of the Kuomintang Government, over suzerainty of Tibet for example, the accession of a communist government created some alarm. Furthermore, after 1949 there several Maoist communist groups emerged on the Indian political scene and the potential threat of a fifth column would certainly have increased the concern engendered by the accession of Mao Zedong. Nevertheless, Nehru calculated that China could not threaten India so soon after such a long and attritious civil war.[2]

Nehru and his advisers continued to misjudge fundamentally the Chinese intentions. In 1960 the Chinese Government began to question blatantly the legitimacy of the McMahon Line by sending patrols into disputed areas. In 1961 the People's Liberation Army occupied Dehra

1 Sardesai [1976], p.85.

2 Kavic [1967], pp.41-43.

Compass and established a border post on the Chip Chap river which brought the Chinese to their 1960 territorial claim line. The Indian Government began to respond in kind by establishing outposts throughout the disputed areas for both military and political ends. By mid-1961 the Indian Government considered the position to be relatively stable and balanced. It concluded that it was time to challenge the Chinese outposts and severed their lines of supply and communication. On 30 November the Chinese delivered a written warning to India - 'The Chinese Government would have every reason to send troops across the so-called McMahon Line and enter the vast area between the crest of the Himalayas and their southern foot'[3]. In April 1962 the eight year agreement over Tibet between India and China expired and Chinese activity in the disputed region intensified. By mid-1962 Nehru was claiming that his China policy had been a success but Beijing retaliated by increasing the number of patrols in the area and attacking India aggressively in newspaper editorials. In July both sides met eyeball to eyeball when Chinese troops surrounded an Indian post but the Chinese eventually retreated when the Indian troops stood their ground. Interpreting the Chinese action as a 'blink' the Indian Government became more strong-willed and began to challenge forcefully China's movements into NEFA. By September the border dispute appeared to be on the verge of unravelling. Throughout the month the two sides clashed sporadically. By mid-October Nehru let it be known to the press that the Army had been instructed to eject the Chinese troops from NEFA. After further skirmishing the Chinese mobilised along the borders of Sikkim, Bhutan and NEFA. By 20 October the conflict had started and the Chinese advanced on both the Ladakh and the NEFA fronts.

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3 Khera [1968], p.171.

In the Ladakh theatre India proved just able to prevent a complete rout, although by mid-November the Chinese Army was in possession of all the territory its government had previously claimed. In NEFA the Indian Army fared much worse. In the face of a forceful assault by the Chinese, the Indian defence effort collapsed, the morale of the troops was crushed and the Army leadership disgraced. General Kaul, who had been sent to organise the defence of NEFA, was posted to the Punjab and General Manekshaw took over, whilst the Chief of Army Staff, General Thapar, opted for indefinite 'sick leave'. With the Chinese within 40 miles of Tezpur (now in Assam) and 100 miles from the Digpoi oil fields, both the military and the Government were in complete disarray.

Although the Indian Army possessed considerable reserves and resources during the early-1960s, its weapons and ancillary equipment were dated, its troops disorganised and, as an institution, the Army was still in a state of transition because it had previously clung too tenaciously to the traditions of the Raj. Furthermore, the defence of NEFA had been overlooked and neglected. After several years of procrastination at the political level throughout the mid-1950s, a suitable strategy for the defence of NEFA was not given either consideration or resources until 1960 when General Thimayya conducted a study of alpine defence organisation and tactics in the Italian Alps. Thimayya's recommendations for a strategy based upon lightly equipped and mobile infantry in the forward areas and backed by a strong and highly mechanised force on the plains was rejected by Nehru for three, inter-related, reasons. First, he felt that the Chinese did not constitute a sufficient threat to warrant such a

dedicated strategy. Second, the implications for defence expenditure were considerable. Third, he did not want to jeopardise his carefully constructed foreign policy.[4]

On 20 November the Chinese Government announced a unilateral withdrawal to points where it considered the territorial boundaries should be. The Indian Government objected vehemently but there was little it could do except appeal for both a withdrawal and a reversion to the status quo ante. To all intents and purposes India had lost the war and was forced to face the implications of both territorial loss and national humiliation on a grand scale.

The scale of the defeat and the culpability of both the civilian and military institutions cannot be underestimated. In terms of national identity the 1962 war had an impact upon India similar to the US defeat in Vietnam. An even greater loss of international prestige was avoided only by the coincidental occurrence of the Cuban Missile Crisis which kept the rest of the world greatly concerned and fully occupied. From a military standpoint the armed forces proved to be utterly incapable of defending India's territorial integrity in the East and the implications of the débâcle were not lost on those who were concerned for the future of Kashmir.

Although all agree that the Indian armed forces fared very badly, there are differences in the judgements of exactly how poorly they performed which range from total non-performance to marginal defeat. Over the course of the war only the Army was actively engaged. The Navy was incapable of playing any part in the conflict. The Air

4 Kavic [1967], p. 96.

Force was scarcely used for four possible reasons. First, there were technical difficulties involved in operating in Himalayan altitudes, particularly when the aircraft were fully armed and, when the problems became evident, military leaders became reluctant to use air power[5]. Second, the threat from the Chinese armed forces was exclusively ground based because they too sidelined their Air Force, which reinforced the hesitance of the Indian leadership, though much might have been gained from ground attack missions against an opposing army devoid of air cover. Instead, the role of the IAF was limited to supply and transport duties but even these perfunctory tasks were complicated by a limited number of poor quality landing strips at Leh in Ladakh and Chusul in NEFA. Third, the Army reluctance to call upon the IAF was possibly due to traditionalism and inertia on the part of the Army concerning inter-service co-operation.[6] Fourth and more likely, however, the Army may have decided to sideline the Air Force as a way of downplaying the importance of airpower during a period when the IAF as an institution was in the ascendancy. In addition, had the Army performed better it could have increased the legitimacy of its claim for increased capital expenditures following a period when its own fortunes had been meagre.

Following the termination of hostilities the Government commissioned an enquiry by Lt. Gen. Henderson-Brooks. This remains classified, and since the war successive Indian Governments have refused to release this and other documentation pertaining to the war. Most of the information available is to be found either in autobiographical

5 Subrahmanyam [1976], p.119.

6 Thomas [1986], p.145-6.

accounts from high-ranking officers involved in the war or from commentators who have used either these sources or their authors for primary source material.

The most popular and enduring explanation for the Indian defeat charged Krishna Menon with almost total blame although the significance of the 'Menon factor' is unclear. In many ways it does seem that Menon had a poor record in certain areas of security planning, particularly with regard to the Army and his alleged attempts to build a separate political base through promotions. More to the point, however, although a significant amount of advanced new equipment was absorbed by the armed forces during Menon's term, for the most part it had been ordered before he took control of the defence portfolio. With the exception of the Hunter, Menon generally attempted to acquire a reputation as an economy-minded rather than a profligate defence minister[7]. Equally, however, Menon was the politician senior Indian Army officers loved to hate and the crushing defeat against China offered an opportunity to place total blame on Menon's shoulders and mount a full scale campaign to have him removed from office. Over time the constant and unrelenting criticism of Menon from the press, the armed forces and the Congress Party created a situation which led directly to Menon's resignation. It also created an atmosphere in which any other explanation for defeat became inconceivable. Nevertheless, Vertzberger has traced the roots of the 1962 failure to bureaucratic mismanagement and dereliction of duty on the part of the key decision-makers[8]. In contrast, Lt. Col. J.R. Saigal, a senior ranking Army officer who experienced at first

7 Kavic [1967], fn #33, p.155-156.

8 Vertzberger [1984], pp.69-93.

hand the rout in NEFA, has argued that excessive corruption and incompetence in the higher echelons of the Army during the early 1960s was to blame. He also asserts that India's defences in NEFA crumbled from the very start of the war[9]. Nehru himself remained loyal to Menon and only demoted him under extreme pressure, preferring instead to blame defeat upon equipment and logistical failures.

The causes of the 1962 defeat remain, therefore, somewhat confused. Clearly, the defence effort was deficient and it is likely that the war was lost due to a combination of political miscalculation, inadequate security arrangements, intelligence failures and military error, in that chronological order. However, in this instance, the ramifications of the 1962 defeat were more important than the defeat itself, including the loss of territory. The outward sense of optimism which had characterised defence and foreign policy making at the political level between 1947 and 1962 never returned. Thereafter, politicians from all parties were at one in arguing that, in the future, expenditure on defence should be a first charge on the exchequer.

In the aftermath of the humiliating defeat Nehru admitted to a failure in defence planning claiming that 'military weakness has been a temptation, and a little military strength may be a deterrent'[10]. In October 1962 Menon was demoted within the Cabinet and the Government lost not only a remarkable if controversial political

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9 Saigal [1979]. As a Lieutenant Colonel Saigal ranked seventh in the Indian Army Chain of command and rank structure.

10 Kavic [1967], p.192.

figure but also a decision maker with a genuine commitment to self-sufficiency in the defence sector, which, as will be seen, was very significant for India over the long term. Following pressure from senior members of the Congress party Nehru took up the defence portfolio himself and moved Menon to a newly created but insignificant cabinet post of Minister for Defence Production, a position which deprived him of much of his earlier influence.

Once Menon had been sidelined the cabinet set about redressing what it considered to be one of the former Defence Minister's key failures, namely a lack of defence preparedness. Whether or not this charge against Menon was justified, it had the effect of concentrating the Government's attention on technological rather than institutional solutions to the country's insecurities. Indeed, the former virtually cancelled out the latter: an under-equipped army is not necessarily inefficient or the victim of poor foreign policy, military, intelligence and political decision making.

However, Nehru and the rest of the Cabinet were admitting to the wrong mistake. As has been argued in the previous chapter, India was not a militarily weak country overall, even though the Eastern borders may have been poorly defended and these problems compounded by an inhospitable terrain and acute logistical shortcomings[11]. The modernisation programme of the 1950s had given India a defence posture of some significance, inappropriate perhaps for defence

11 According to Raju Thomas a shipment of small arms was rapidly moved from the Western to the Eastern sector when hostilities began but took six weeks thereafter to reach the front line, Thomas [1986].

against China and biased towards the Air Force but, nevertheless, India could hardly claim to be militarily weak.

In the years before the war the armed forces had been given a relatively free hand in the interpretation of defence needs. In so doing and together with the politicians, they had virtually ignored the prospect of a conflict with China, although they did demand a change of policy when it became evident that the defence of NEFA was inadequate given Chinese intentions. For the armed forces and, indeed, Nehru and his advisers, the threat to India's security was in the North West and their reasoning was much more subtle than politics and defence, as Kavic has recognised,

> "In the absence of a clearly identifiable threat from China until the later 'fifties, Pakistan provided an expedient strategic rationale without which, given the pronounced nonaligned posture of the government, sound and efficient military policies would have been difficult to formulate and implement. The civilian fear and distrust of Pakistan thus appeared as a 'blessing in disguise' in preventing even greater economies in defence outlay and was used to good effect."[12]

5.1.2 Defence Policy

In the aftermath of the 1962 war the Indian Government and polity were united in the need to commit increased resources and effort to upgrade the country's defence capabilities. The first budget after the war in 1963 planned for a near doubling of defence expenditure from Rs.473 crores allocated in 1962-63, which included an emergency allocation of Rs.100 crores for the war effort, to Rs.867 crores[13].

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12 Kavic, [1967], p.153.

13 Thomas [1978], p.106.

In the following year India increased the percentage of GNP spent on defence to 4%, 32.5% of total government expenditure. At the same time, all debate at any level on the required scale of defence expenditure disappeared. Instead, the primary question became one of how best to allocate the quantum increase in defence allocations.

The rise in defence expenditure after the war led to a rigorous upgrading of defence capability. The result was a five-year plan for defence made public in early 1964 and implemented immediately. The plan had six objectives. First, the creation of an 825,000-man army and the modernisation of its weapons and equipment. Second, the modernisation of the IAF and its stabilisation at forty-five squadrons. Third, the modernisation but not the expansion of the Navy. Fourth, an increase in the domestic defence production base. Fifth, infrastructural improvements in the border areas. Sixth, the expansion of research and development[14]. However, it is interesting to note at this point that the modernisation programme represented essentially more of the same. Nehru and his successor, Shastri, (Nehru died in May 1964), committed India to a full scale modernisation programme with a renewed emphasis upon the threat from China but neither considered a defence review. At no point, it seems, was the question addressed of why India failed to defend itself adequately against China, given the resources it had at its disposal overall. Consequently, failures at the level of strategic planning, intelligence and military performance were subsumed under a more general acceptance that whatever resources the Indian armed

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14 Kavic [1967], pp.192-193.

forces had at the time were insufficient to meet the security threats on all the relevant fronts.

Coupled with the commitments already made to defence between 1947 and 1962, some of which had not come to fruition by 1962, the five-year plan amounted to a significant increase in India's defence capability. Nevertheless, there were inherent and persistent weaknesses. Despite the commitment to increased defence production, the armed forces remained heavily and unduly dependent upon imported military technology. A clear strategy for reversing this situation was nowhere in evidence, in stark contrast to Nehru's stated commitment to indigenisation and the 1964 defence plan. Not only did this place increasing pressure upon foreign exchange reserves, which eventually led to substantial delays in procurement, it also begot political obstacles.

5.1.3 The 1964 Rearmament Programme

The new defence plan began in April 1964 and was designed to extend over a three year period. The scale of the defeat by China forced the Government to concentrate primarily upon re-equipping and strengthening the Army following a period of restraint before the 1962 war. Moreover, the Army programme was specifically directed towards meeting the Chinese threat and Nehru went to considerable pains to assure the Pakistan President, Ayub Khan, that the programme was designed for defence against China rather than belligerence against Pakistan.

As a first step India appealed for military aid, despite the consensus over the need to raise defence allocations, and the response was a good one. This also contradicted India's policy of non-alignment. The United States and Britain both extended equipment grants of $60 million and France, Canada and Australia contributed about $10 million of supplies.[15]

In March 1962 the budget for the Army stood at Rs.245 crores and in the budget following the war allocations more than doubled to Rs.571 crores[16]. Together with the aid packages this rise facilitated a major reequipment programme and an organisational and training review.

On matériel, the replacement of the Lee-Enfield .303 rifle by the semi-automatic Ishapore was speeded up, heavy mortars were procured from France together with an agreement on licensed production, the ordnance factories were instructed to develop a mountain howitzer and the production of Japanese Nissan trucks was increased[17]. The Avadi Heavy Vehicles factory in Madras delivered seventy medium tanks to the Army in 1965, the Sten machine gun was replaced by the more modern Sterling, the .303 was rebored to a new standard and improved types of communication equipment were sought from both foreign and domestic sources. Also, efforts were made to upgrade the quality of the vehicle fleet by discarding vehicles after less use and acquiring better licensed production arrangements.[18]

15 SIPRI [1971], p.477.

16 Thomas [1978], p.151.

17 SIPRI [1971], p.477.

18 Kavic [1967], p.195.

The size of the Army was increased from 10/11 divisions to 21 divisions and stress was placed upon the development of mountain divisions and the recruitment of hill peoples such as Gurkhas and Nagas. Troop training for jungle and mountain warfare was stepped up, largely through the expansion of the High Altitude Warfare School. Some attempt was made to overcome the extreme reliance upon conventional tactics, particularly with regard to mobility, which made the Indian Army so vulnerable to the unorthodox procedures employed by the Chinese Communists which resulted from the distinct approach to warfare developed by Mao Zedong. On the organisational front new logistical guidelines were introduced and similar efforts were made to make better use of intelligence.[19]

The acquisition of armoured fighting vehicles had been largely decided upon before the war and little was accomplished between the termination of the Sino-Indian war and the outbreak of the 1965 war with Pakistan. Even the acquisition of the Soviet PT-76 light tanks dates back to 1955 and the agreement to procure 225 T-55 main battle tanks between 1968 and 1971 also pre-dates the 1962 war.

For both the Air Force and the Navy there was less that could be achieved directly because the blame for defeat and the emphasis upon modernisation, was placed squarely upon the Army. However, this did not prevent the Air Force receiving a substantial increase in planned strength, although not all for front line equipment. Contained within the plans for expanding the Air Force to forty-five squadrons were proposals for a strengthening of ground based air defence,

19 Kavic [1967], pp.183-4, 195.

increased transport capacity, to be financed from US military aid, and Soviet and French helicopters in the form of 50 Mi-4s and 20 Sud Alouette III. The Government also reached agreement with France over the licensed production of the Alouette III and between 1966 and 1973 120 units were produced at HAL, allegedly with an indigenous content of 90%[20]. Another fillip to the indigenous defence effort came with the redeployment of the team working on the Kiran jet trainer to the HF-24 fighter project, although in the event the hopes for the swift upgrading of the aircraft to a supersonic version came to little. Indeed, the procurement of 160 Hawker Hunter F.56 through the 1950s to replace the Vampires, Ouragans and Mystères was seen as an interim measure pending the completion of the HF-24 project, which perhaps indicates the lack of faith of the defence planners in the capabilities of HAL (see Chapter Seven).

The Navy received even less in the modernisation programme. Although overtures were made towards the Swedish and Japanese Governments concerning possible collaborative ventures, it is likely that the moves were made to unsettle Britain's confidence in future orders and thereby up the ante. The strategy quickly showed results when Britain offered the Indian Government credits totalling £4.7 million for the construction of three Leander class frigates, an offer that was swiftly accepted. Both Britain and the United States refused to accede to India's request for three destroyers and Britain was also equivocal over requests for production facilities for the Oberon class submarine following the Indian Government's acceptance of the Navy's argument for a submarine arm. However, the Government did manage to augment the capability of the Vikrant and establish bases

20 SIPRI [1975a].

on the Andaman Islands and at Vishakhapatnam, which also became a major dockyard[21].

5.1.4 The Strengthening of Soviet-Indian Relations

Perhaps the major shift in Government policy over this period concerned the consolidation of cordial relations with the Soviet Union and, to a much lesser extent, the development of a supplier-recipient relationship with the United States. The flirtation with the Soviet Union was primarily intended to provide the quantity of defence equipment which India's meagre foreign exchange reserves could not cover if all the equipment was procured from Western sources.

The burgeoning relationship with the Soviet Union in fact went back to the mid-1950s and does not date from the cooling of Sino-Soviet relations in the early-1960s, as might be expected. A major turning point came as the Soviet Union moved away from the isolationist policies adopted in the 1940s under Stalin in favour of a more active foreign policy under Khrushchev. Even before the crucial Twentieth Congress of the Communist Party in 1956, the Soviet Union was eyeing India as a co-operative and ally. As early as August 1953 Malenkov made a straightforward bid for friendship,

> "The position of so large a state as India is of great importance for strengthening peace in the East. India has made a considerable contribution to the efforts of peace-loving countries aimed at ending the war in Korea, and relations with India are stronger; cultural and economic ties are developing. We hope that relations between India and the Soviet Union will continue to

21 Kavic [1967], pp.201-202.

> develop and grow, with friendly cooperation as the keynote."[22]

A trade agreement in 1953 was followed by an unofficial visit in the same year by Nehru's daughter, Indira Gandhi. Then came the unprecedented visit by Nehru in June 1955 which was followed by the visit of Bulganin and Khrushchev to Delhi five months later. The material benefits which India derived from the relationship were considerable. In 1953 trade turnover between the two countries was only $1.6 million, a total lower than the level during the closing days of the Tsars. However, by 1958 trade had increased to $94.6 million and by 1965 India had become the largest non-communist trading partner of the Soviet Union.

The relationship was also significant in other ways. Whereas Western suppliers often prevaricated over the transfer of capital goods, the Soviet Union wasted no time when it came to turnkey projects such as the Bhilai steel mill. In 1960, the Soviets began to provide India with cheap crude oil. On all transactions India was able to pay either with rupees or in goods, which permitted it on occasion to export manufactured items which could not be sold in the West. However, this benefit was partially offset by the Soviet penchant for reselling certain Indian goods in Europe to help its own foreign exchange problems. This subsequently drove down the value of Indian exports. Finally, economic aid was given on extremely favourable terms, generally with an interest rate of 2.5% over twelve years with payments beginning only when the project was completed. In contrast,

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22 Menon [1963], p.58.

offers from Western governments were in the region of 4.5-6.3% over a shorter length of time, with repayments in hard currency.[23]

However, head and shoulders above all other benefits, the Soviets began to export defence equipment on equally favourable terms. In 1960 both sides reached agreements on military credits and in the followings years up until 1965 the transfer of helicopters and aircraft (Mi-14, An-12, MiG-21), Atoll air-to-air missiles for the MiG-21 and light tanks, proceeded apace. This equipment came cheaply and permitted India the opportunity both to diversify and increase its overall defence capability. Moreover, the Soviet Union proved a useful ally in other, related ways. When India invaded the Portuguese enclaves of Goa, Damon and Diu the Soviet Union used its power of veto in the UN Security Council to minimise the scale and impact of international condemnation. As relations between China and India grew worse prior to the outbreak of war the Soviet Union adopted a neutral position which was as much a disadvantage for Beijing as it was an advantage for New Delhi, although during the early stages of the conflict the USSR appeared to favour 'brotherly' China over 'friendly' India, albeit temporarily[24].

Nevertheless, the Indian Government managed to extract the most advantageous conditions from the Soviet Union in part because it successfully played off the two superpowers against each other. Throughout the period leading up to the MiG deal, the Indian Government actively entertained the idea of a significant procurement of advanced military technology from the United States. For example,

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23 Horn [1982], pp.1-15.

24 Sandhu [1988], p.175.

throughout early 1964 the Government appeared to be negotiating actively with the USA for the commercial sale of finished and unassembled F-104s (including a plant to be built in India by the Americans), the F-101 Voodoo, the F-102 all weather interceptor - the system most comparable to the MiG-21 - and, also, three to five squadrons of F-51 Skyray and F-5B Freedom Fighters, both equipped with Sidewinder missiles[25]. However, negotiations came to nothing. In theory, a defence agreement with India would have been in the best interests of the US as a further bolster against the Communist bloc. (Even though tensions between China and the Soviet Union had already occurred the full significance of the Sino-Soviet split was recognised somewhat slowly in Washington.) At one point it looked as though India might acquire a 20 year credit arrangement with the Export-Import Bank for a part of the transaction, but India's inability to finance such a major deal was fairly evident from the outset. Quite likely, the flirtation with Washington was probably a well disguised attempt to create concern in Moscow and offset Soviet attempts to curry favour with Pakistan during this period. What the Kremlin was hoping to achieve was to deprive both China and the USA of a useful and strategically important ally. Furthermore, during the period when the MiG deal was under consideration Moscow was by no means convinced that India should become the favoured state in South Asia.

As the inter-war (1962-65) rearmament process continued the scale of diversification became clear, as did the Government's willingness to consider acquiring military technology from practically anywhere. Basically, India had started to move away from reliance upon the

25 Kavic [1967], pp.198-199.

British for defence equipment and turn instead to both Eastern and other Western suppliers to ensure that no one country or power bloc could be in a position to deny selectively defence equipment and thereby influence either defence or foreign policy. In effect what this amounted to was a form of negative non-alignment. Nevertheless, the strategic wisdom of this policy is open to question. Diversification without doubt makes for an excellent political choice, particularly when a country's foreign policy is based upon the principle of non-alignment, which is so difficult to practice in many areas. However, from a logistical perspective the acquisition of equipment from so many different sources with such little interoperability must have created some extremely time consuming and expensive problems, particularly vis à vis spare part inventories and maintenance. It only needs to be remembered how much concern there is in NATO over interoperability to appreciate the problems for a country with a considerably less developed infrastructure than exists in Western Europe and which operates both Western and Soviet equipment.

5.1.6 The 1965 and 1971 Wars with Pakistan: Consolidation and a New Direction

In 1965 Pakistan and India clashed again (the 'Second Round') but India had relatively little difficulty in asserting its undoubted quantitative military superiority. The Pakistan Air Force was in principle much better equipped than the IAF due to the recent acquisition in significant numbers of the F-104 and F-86 from the United States and, indeed, it conducted some successful operations.

However, the Pakistan pilots found the F-104s extremely difficult to handle and throughout the conflict they were deployed with less efficacy than the Indian Gnat. Much the same was true of Pakistan's Patton tanks whose operatives were unable to come to terms with the automatic fire controls[26]. All in all, the conflict was short-lived and relatively fruitless. Pakistan's attempt to spotlight the Kashmir problem on the world stage by provoking action by Muslim freedom fighters across the UN cease fire line was rather futile. Similarly, India's attempt to weaken seriously the Pakistan defence effort through attrition on the ground was hardly a resounding success either even though the Indian armed forces did prevail following both counter attack and invasion[27].

Coming so soon after both the 1962 Sino-Indian war and the death of Nehru, the 1965 war prompted a serious political debate within India over the credibility of non-alignment as a means towards security. Nehru had always possessed a wider vision as to the positive role and indeed the nuisance value of neutralism and non-alignment. However, the effect and impact of his foreign policy was experienced principally beyond the region of South Asia and, furthermore, non-alignment did not seem to deliver the requisite security closer to home. Within the space of three years India had been attacked by both China and Pakistan, both of whom were edging closer together diplomatically, and India held territory claimed by both. Neither the superpowers nor Britain seemed to possess either the loyalty or the influence to prevent an attack by either Pakistan or China. Still less could be done to prevent a united front. Without doubt,

26 SIPRI [1971], p.75.

27 Kavic [1967], p.189.

non-alignment was the preferred foreign policy for India but the new Prime Minister, Indira Gandhi, was faced with the problem of finding a fit between foreign policy, security and defence in the absence of both healthy foreign exchange reserves and alignment with a major power.

In the wake of the 1965 war Indira Gandhi sought to consolidate India's regional position after two decades of flux in defence and foreign policy coupled with an uncertain domestic political environment. First, however, she addressed the complex and troublesome domestic front, an inevitable prerequisite for future activity at the regional level. In the late 1960s Mrs Gandhi split the Congress Party and in so doing consolidated her political position and guaranteed her immediate political future by alienating the right with the backing of the left and centre of the party. This gave the Prime Minister an increasingly firm grip upon the political process and gave her a much sounder political power base.

Between 1965 and 1971 activity on the defence front was low key. Without doubt, the new Prime Minister's concern to ensure her own political future distracted her attention from regional issues, particularly after the successful conclusion of the 1965 war. It was also the case that Mrs Gandhi had two major problems to confront which slowed the rate of further defence procurement; the first concerned internal economic problems, the second a pronounced dip in relations with the Soviet Union.

During the late-1960s the Indian economy started to show signs of stagnation. Until 1965 economic progress had been reasonably good.

The industrial base had grown significantly between 1950 and 1965, particularly after the balance of payments crisis in 1957 which led directly to severe import controls. Government investment in the capital goods sector and the intermediate sectors, such as iron and steel, had been considerable and with development expenditure, the demand for these goods increased. During this period industrial output grew by about 7% per annum. Agricultural output increased by 2.8% per annum and the annual GNP growth rate was in excess of 4%. Furthermore, the battle within the Congress Party between the more conservative groups aligned to business interests during the first few years of independence, led by Vallabhbhai Patel and Prakesh Tandon, and the democratic socialist/development lobby led by Nehru had been resolved in the latter's favour. During this era it seemed as though India could possibly find answers to its enormous and complex problems of poverty and underdevelopment, even though really effective wealth redistribution was lacking - the lower 40% of the Indian population experienced little benefit from these economic improvements.

Yet at the very point when the Indian economy should have experienced take-off it drifted into a decade of stagnation caused by a combination of the appalling droughts of 1965-66 and 1966-67, a sharp decline in foreign aid and growing contradictions within the economy. As the numbers employed in the industrial sectors increased, by 6% between 1960 and 1965, agricultural production declined. Although food aid created initial stability, nevertheless, agricultural prices increased one-third more quickly than the price of manufactured goods between 1960 and 1964. Basically, the Indian agricultural sector was failing to keep pace with the growth rates in other parts of the

economy, which caused both inflation and an undue reliance upon food aid.[28]

Coupled with increasing problems over the nature and direction of foreign assistance, particularly from the United States[29], and unable either to raise taxes further or to push public sector industries to produce their own savings, the Indian economy became vulnerable as, during the Third Five Year Plan, industries expanded, consumer incomes rose and the Government encouraged exports. The increasing lack of fit between agricultural and industrial growth presented the Government with impossible choices which were compounded by the opposition of farmers to compulsory state procurement at fixed prices and the taxation of agricultural income[30]. The choices open to the Government were either to extract savings from the economy and suffer the political consequences or to push for substantially increased foreign aid both to tide the economy over and to stimulate exports and agricultural growth. However, whichever strategy was chosen, good harvests were needed to relieve the aid burden and this is precisely where the economy came unstuck when failed harvests and famine struck India in the two year period, 1965-1967.[31] All in all the economy did not recover for almost a full decade.

The onset of agricultural problems and the economic crisis did not lead to a reduction in defence allocations but certainly to their stabilisation. Between 1965 and 1971 total defence expenditure never

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28 Mellor [1981], p.100.

29 Weiner [1981], p.49-68.

30 Rubin [1982], p.182.

31 Mellor [1981], p.103.

actually went down, though it fell as a percentage of both total government expenditure and of GNP. From a high point in 1965-66, when defence expefiditure totalled 4.0% of GNP, it declined to under 3.5% before rising again temporarily between 1971 and 1973 to a fraction under 4.0%[32]. Also, during the period after the 1962 war, the growth in defence expenditure was compensated for by corresponding tax increases. However, the raising of taxes to fund increased defence expenditure did not increase the resource base available for investment in the public sector which inevitably added to the economic problems which the Government had to face[33].

The second factor which influenced defence policy and posture was increasing uncertainty regarding India's relationship with the Soviet Union. The motivations on the part of both sides during this period were extremely complicated and have much to do with the international geo-political web involving China, the Soviet Union and the United States on the one hand, and India and Pakistan on the other. The common denominator throughout this period was China, and the attempts by both superpowers to alter the balance of power in Asia and globally by either including or excluding the Communist Government.

The interest in China followed two unrelated events, the Sino-Soviet split and President Nixon's decision to withdraw from Vietnam. For the Soviet Union, China presented a major problem. Unable and unwilling to mend the rift that had opened up in the late-1950s, the Soviet Union sought to isolate Communist China and prevent if possible the growing rapprochement between China and the USA. After

32 Thomas [1986], Table 5.5, p.184.

33 Rubin [1982], p.184.

1962, India became a natural ally in this process but for unrelated reasons Soviet-Indian relations deteriorated over the late-1960s. First, the Soviet Union was disappointed when India failed to sign the Non-Proliferation Treaty, which was opened for signature in July 1968, even though the treaty was clearly unpopular in India. Second, internal developments within India, prior to Mrs Gandhi's consolidation of power, appeared to the Kremlin to be moving too far to the right and frequent references to Indian 'monopoly capitalism' in the Soviet press fuelled the rift, as did calls for increased nationalisation. The Soviets were also critical of progress on some of the major turnkey projects they had developed in India. Nor was the situation improved by New Delhi's cautious but unequivocal condemnation of the Soviet invasion of Czeckoslovakia in 1968 and the brutal suppression of the Prague Spring. Third, New Delhi objected to the publication of Soviet maps of South Asia which placed the Sino-Indian border more or less in its de facto position.

Above all, however, New Delhi was dismayed by Soviet efforts throughout the last half of the 1960s to drive a wedge between China and Pakistan by successfully developing closer relations with the latter, which was in part motivated by Moscow's supposition that India was too independent an ally to trust implicitly - at one point India even considered offering an olive branch to China to ensure New Delhi's independence of action. The most important activity between the Soviet Union and Pakistan following economic aid packages in the early-1960s was the successful conclusion of an arms transfer agreement in 1968. For Pakistan, the deal was designed to fill the vacuum created by the US embargo in 1965 which, though partially lifted in 1966, had created great problems due to Pakistan's

erstwhile near complete reliance upon US defence equipment. The arms actually transferred were barely significant and did not include, for example, missiles, and also came with a proviso which prevented their use against India[34]. However, it was the political context which concerned India. Not only did the deal coincide with a further weakening of US-Pakistan relations following the premature cancellation of the US lease on Peshawar, but around the same time, Western newspapers reported discussions between Pakistan and the USSR over refuelling rights in East Pakistan; India had earlier refused to consider a similar request[35].

The combination of economic and internal political problems and a cooling of relations with the Soviet Union severely restricted India's ability to continue the modernisation of its armed forces; the Government was simply unable to acquire defence equipment on the open market from Britain, the United States and other major Western suppliers. Arms transfers from the Soviet Union did not cease completely during this difficult period but the lack of commitment was evident. In September 1964, Moscow agreed to provide India with an additional 38 MiG-21s as well as SA-2 Guideline missiles for air defence. In 1968 the transfer of 100 Su-7B fighters costing $1 million per copy began and continued until the end of the decade. India also received 40 T-54 tanks in 1968 and 1969 and, perhaps most significantly, three 'F' class submarines during the same period[36].

34 Reports differ as to what the agreement entailed. The Statesman (Calcutta) (12 July 1968) suggested that the transfer consisted of spare parts for the dilapidated tanks (T-59) and aircraft (MiG-19) Pakistan had received from China whereas SIPRI [1970] p.25, suggest that the transfers were tanks and aircraft spare parts.

35 SIPRI [1971], p.499.

36 SIPRI [1971], pp.833-836.

Nevertheless, much of the equipment received was agreed during a period when relations were much less strained and India's economy less precarious - the announcement that India would request Soviet submarines, for example, came in early 1964 following the US delivery of a submarine to Pakistan.

For the Air Force and Army the period between the two wars with Pakistan was largely given over to operational improvements rather than procurement. After the 1962 and 1965 war it became evident that the Army was not exploiting the potential military utility of air power. Although the problems in 1962 were both technical and institutional, in 1965 the Army only considered using the country's considerable air power for tactical combat support when it found itself under extreme pressure. For the most part the Army and Air Force fought separate wars. In 1969, however, the command and control boundaries between the two services were redefined to facilitate coordination and the benefits of this move were reaped in the 1971 war.[37]

What India appears to have experienced during this period was significant assimilation problems[38]. After more than a decade of frantic procurement for the Air Force in particular, minimal attempts appear to have been made to exploit effectively all aspects of the technology on offer - the full potential of the equipment was not recognised or, if it was, the military leadership failed to master the new found capability.

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37 Thomas [1986], pp.152-153.

38 For a useful explanation of the assimilation concept see Dupoy [1984].

A very different picture obtained for the Indian Navy between the wars. As with the Air Force, the Navy saw little in the way of active duty during the 1962 and 1965 wars, in part because the wars were land based and the naval threats were minimal, but also because the Indian military leadership failed to request naval assistance for blockades, for example.

The Indian Navy's blue water role had been established nearly two decades earlier and during the late-1960s the chiefs of naval staff, Admirals Chatterji and his successor S.M. Nanda, coordinated a high profile debate on raising the status of the Indian Navy. However, arguing that the country's naval power should be increased was made all the more difficult by the relative absence of a viable threat from the Indian Ocean. In recent history the most significant event which the key opinion-shapers could allude to were the reports during the 1965 war, and later confirmed in the memoirs of a Pakistani Air Marshal, that Indonesia's President Sukarno had offered to divert India's attention and resources by seizing the Andaman and Nicobar islands which lie roughly between the two countries[39]. Another tack considered the growing dependence of China on oil imports and the military value which could be gained through interdiction of Chinese shipping to relieve the pressures on India's northern landward defences[40].

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39 Thomas [1986], pp.152-153.

40 This was the view of Capt. D.R. Mehta, quoted in Harrigan [1969], p.30.

The key to the naval debate centred upon the British decision taken in 1966 to withdraw all forces east of Suez and surrender above all the control of the Indian Ocean. The prospect of a power vacuum in the region and the entrenched belief amongst Indian strategists, notably K.M. Pannikar, that whoever controls the Indian Ocean has India at its mercy, opened up an opportunity for naval planners to argue that the country should extend its naval influence.

A report undertaken by the naval study group at the Indian Defence College in early 1969 mooted the idea that India should take the initiative to form a strong military alliance with 'other' South East Asian countries and/or one of the two superpowers. In open defiance of existing Government foreign policy the study group argued the need to contain China by superior strength and this entailed a departure from non-alignment until such time as India's industrial and econonic base was sufficiently strong to support independent action, which would be unlikely until around 1980.[41] The incumbent defence minister, Swaran Singh, rejected the report as did Indian Army strategists who argued that India should have a brown, not a blue water naval strategy.

Nevertheless, the British withdrawal from East of Suez provided momentum for the debate over allocations to the Indian Navy, much of which was articulated via the influential Madras newspaper, The Hindu[42]. Moreover, the Navy found a measure of support in Parliamentary circles, particularly amongst élites which shared the long term view of India becoming a world power of some significance.

41 The Times [13 May 1969].

42 Thomas [1978], p.206.

Also, a parallel debate emerged in the United States which proposed that the US should protect India's maritime interests until such time as it could fully afford to operate independently, which also fitted well with the foreign policy designs of the era,

> "... the United States should underwrite the maritime security of India and the emergent nations of South and Southeast Asia, whose limited resources can then better be used for the development of their armies and air forces for effective deployment in the immediately threatened areas of their territories."[43]

Even without the acceptance of this grand design, Indian naval planners argued that naval allocations had to increase to overcome the growing problem of obsolescence. By the late-1960s, for example, the Sea Hawks allocated to the Vikrant were obsolete yet the carrier's decks were too small for more modern aircraft. Although replacement was beyond the country's means, greater attention to detail was urgently required[44].

Despite the Government's reservations concerning the cost and desirability of implementing the requests of the naval lobby, it proved to be not wholly unsympathetic. Throughout the last half of the 1960s allocations to the Navy grew steadily at the expense of the Air Force, from 7.8% of capital total in 1966-67 to 34.3% in 1970-71[45]. The capital-intensive nature of naval equipment notwithstanding, this was a significant institutional victory which was underscored in 1968 by the elevation of the Chief of Naval Staff to Admiral thereby bringing the post in line with the other services.

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43 US Naval Institute Proceedings [1962], p.109.

44 US Naval Institute Proceedings [1968].

45 Thomas [1986], Table 5.9, p.192.

In terms of equipment, the favourable mood in New Delhi and increased allocations actually bought very little. Apart from the equipment received from the Soviet Union, in 1968 the Navy received the first Leander class frigate from Mazagon Docks in Bombay and Alouette helicopters from HAL in Bangalore. A year later, India received from Britain Hunt Escort Type destroyers, which had long been obsolete in the Royal Navy, and a new helicopter squadron was constituted. In addition, there were proposals and promises to establish a new naval base in the Bay of Bengal and that at some time in the future the likely replacement for the Vikrant's strikeforce would be the V/STOL Harrier.[46]

One of India's most memorable feats since 1947 came with the successful 'liberation' of Bangladesh in 1971, which not only heaped ignominy on Pakistan as the first newly independent country to be dismembered but also assured and increased India's sense of regional hegemony. However, prior to the conflict, India's regional position threatened to become far from secure as the Soviet Union continued its flirtation with Pakistan as a means of pursuing its by now long standing conflict with Communist China. Nevertheless, a combination of both nimble and heavy diplomatic footwork by New Delhi in 1969 in effect assured Indian freedom of action thereafter and, in addition, paved the way for an enduring relationship with the Soviet Union from which the Indian defence sector has been the principal beneficiary.

By early-1969 the Soviet Union showed little sign of back pedalling over arms supplies to Pakistan even though it increasingly required a

46 Thomas [1976], p.214-215.

sympathetic voice from India on China, the more so as Pakistan showed little predilection to lean to one side and reduce its ties with China. Instead, Pakistan agreed to a road building programme to link China and Pakistan via the old Silk Route and through territory claimed by India. Indeed, as a direct affront to the Soviet Union and Mrs Gandhi the Pakistan Government offered to open border talks with China with no preconditions in an obvious gesture of defiance and irritation[47].

For its part, Mrs Gandhi was running dangerously short of options and desperately needed the support of the Soviet Union which could only be achieved by brinksmanship which necessitated threatening the Soviet position in South Asia. The US withdrawal from Vietnam and President Nixon's announcement that henceforth the US would expect Asian countries to look after their own security meant that for India there was little immediate chance of securing concessions from the Soviet Union by currying favour or, perhaps, acquiring arms from the United States. Nevertheless, the Kremlin must have accepted the risk involved in alienating India but as problems emerged between East and West Pakistan the extent of the gamble must have become clearer - effectively Moscow risked losing all its influence in South Asia if it alienated India and Pakistan became too difficult an ally.

The growing problems between East and West Pakistan were rooted in economic disparities which stemmed from the inordinate economic and

47 The anti-Soviet nature of this gesture is underpinned by the observation that the Indian Prime Minister could not offer talks without preconditions - the original Sino-Indian border is enshrined in the Indian constitution and, as such, any resolution of the long standing dispute requires a change in the Indian constitution and a two thirds majority in Parliament which no Prime Minister before Rajiv Gandhi has ever possessed.

political power wielded by the Punjabi ruling classes and the military. Conflict between East and West was inevitable, particularly given the level of inequality between the two wings and the unwillingness on the part of the state to redress the situation. In all likelihood Pakistan would have divided itself, even without the assistance of India. However, the 'liberation' of Bangladesh offered a considerable regional prize for India and virtually negated the effects of the 1962 war.

Following the 1970 election in Pakistan, the leader of the Awami League, Sheikh Mujibur Rahman, took control of East Pakistan, which constituted one of the five provinces in Pakistan. Zulfikar Ali Bhutto won a less than decisive victory than predicted but became Prime Minister. The strength of Mujibur's support in the East forced Bhutto into talks with the provincial leader which quickly came to nothing. In addition, East Pakistan was reeling under the effects of an appalling cyclone and its problems were compounded by the inability of relief organisations to cope with the disaster. Approximately ten million Hindu refugees and fugitives from the internal fighting that had erupted spilled over into India. Seizing the opportunity India invaded East Pakistan, swiftly overran its defences and captured 90,000 prisoners. In the West, India moved into the Rann of Kutch and regained a slice of Azad Kashmir. The drawn out conflict between East and West Pakistan and the reorganisation and synchronisation of the armed forces bestowed upon India two decisive advantages. The event was marred for the Indian Government, however, by the appearance of the USS Enterprise and several escort ships in the Bay of Bengal. This symbolic gesture in support of Pakistan was not lost on the Indian élites and the event

still figures frequently in foreign and defence policy debates - it has become an extremely potent symbol.

5.1.6 The Soviet Union and India - Burgeoning Dependency

The 1970s was the most turbulent decade independent India has yet experienced; a period of both political and economic chaos. Throughout the early 1970s the economy went from bad to worse. The fourth Five Year Plan (1969-74) was characterised by reckless deficit financing. In 1972-73 the important growing season which occurs during the monsoon, the kharif, was largely a failure and this setback was swiftly followed by rises in oil prices following the formation of OPEC. Between January 1972 and January 1974 the price index rose by 40%.[48] The political coalitions which Indira Gandhi had so successfully engineered a decade earlier along class lines began to break up as disenchantment appeared amongst the ranks of organised labour, students and the intellectual left. The growing tension between these groups and the Government was exacerbated by strike breaking, rises in the base lending rate and other measures designed to decrease dissent, increase savings and investment and reduce the flow of credit in the economy. Although some of these measures improved the Prime Minister's popularity to some extent, they did not prevent the Emergency which resulted from the Allahabad High Court's indictment of Mrs Gandhi on charges of electoral malpractice which subsequently led to her receiving a statutory disqualification from political activities for five years. Although the Supreme Court granted a stay pending appeal, the Prime Minister

48 Jha [1980], p.135.

declared a state of emergency two days later, swiftly arrested large numbers of political opponents and imposed draconian censorship measures.

Started in June 1975, the Emergency lasted for nearly two years, until eventually the Janata Party was elected in 1977 with Morarji Desai as Prime Minister. However, no sooner had the new government taken power than the inevitable splits in the fragile coalition occurred. This allowed Mrs Gandhi to resume power three years later after winning the 1980 election.

The complacency with regard to security brought about by the dismemberment of Pakistan, the parlous state of the Indian economy, together with the level of political turmoil, pushed defence and, to a lesser extent, foreign affairs into the background. Moreover, the aftermath of the war was double-edged for India. Although regional hegemony and additional security were recognisable gains, sufficient problems occurred during the 'seventies to diminish considerably the gains from the war.

First and foremost, the complex diplomatic game involving India, the Soviet Union, the United States, Pakistan and China proceeded apace. Although the United States continued with its arms embargo on South Asia and generally concentrated upon extricating itself from the Vietnam war, the movement towards China was unmistakable. This process reawakened Soviet interest in Pakistan, particularly since many of the problems of political instability which emerged in the 1960s been resolved, ironically by India for the most part.

Although Soviet policy was open to opportunities to weaken China through overtures to Pakistan, nevertheless, the Kremlin did its best to fulfil all its political obligations to India under the 1971 Treaty of Co-operation and Friendship. In 1972 Moscow gave Foreign Secretary T.N. Kaul and Planning Minister D.P. Dhar warm receptions on separate visits. Both events led to increased diplomatic support and assistance for India's ailing economy. Also in 1972 Admiral Gorshkov visited India to encourage the expansion of the Indian Navy as an additional counter to the burgeoning US naval build-up in the region. During the same year Moscow offered New Delhi another Petya class frigate. In October 1972 General Secretary Brezhnev visited Delhi. The occasion was given a very high profile in Moscow as part of an attempt to reactivate interest in an Asian security complex to form a power bloc against China.

Despite the Soviet Union's equivocation over whether or not to pursue friendly relations with Pakistan and India's countering by either cooling its rhetoric or threatening to play the China card, which entailed a normalisation of relations intended to isolate the Soviet Union, nevertheless, the underlying strength of bi-lateral relations continued through until the mid-1970s. However, after the 1971 war the Kremlin barely raised the issue of military aid and arms transfers, although it is unclear as to how interested the Indians were in further agreements. Until 1975, procurement from the Soviet Union was low key and amounted to little more than the facilities to produce improved versions of the MiG-21. On the Soviet side the level of antipathy may have been a manifestation of the burgeoning détente between East and West and, given the US arms embargo on the region, which remained in place until 1975, the desire not to upset

the regional balance. In Delhi it may have been the case that first, the Government was becoming aware that dependence upon the Soviet Union was uncomfortably strong. By the early-1970s, arms imports from the Communist bloc represented an inordinately high percentage of military imports. In 1961 imports from these sources amounted to a mere 10% of total military imports, in 1971, 1972 and 1973 the level was consistently 90%[49]. Second, the decision makers in New Delhi undoubtedly came to the conclusion that further modernisation was too expensive and unnecessary, from a regional political perspective at least. Even though Moscow accepted payments in rupees and goods, the benefits were frequently negated by 'switch trading' whereby East European countries would export goods previously given to the Soviet Union for payment by India as a means of raising foreign exchange. Payment to the Soviets in exportable goods may not have actually reduced levels of foreign exchange but would have cut considerably the potential for earning hard currency during a period when India's reserves were extremely low.

Nevertheless, on the question of Soviet defence equipment the pattern of Indian behaviour was contradictory for the first half of the decade. On the one hand there was a growing awareness of dependency and concern thereof. In addition, during this period there were several suggestions that the Indian armed forces were dissatisfied with the quality and flow of equipment from the Soviet Union. The Foxtrot submarines, originally designed for cold war operations, gave recurring problems in tropical zones. Over thirty Su-7 fighter-bombers were lost during the 1971 war in part because their slow rate

49 Terhal [1982], Table 6, pp.14-15.

of climb made them vulnerable to ground fire.[50] Because of centralised production schedules Soviet spare parts were taking up to 37 months to come through[51]. Also, on each given system spare parts requirements would have been greater for the Indian armed forces on account of the inevitable increase of workload due to smaller inventories. For example, an Indian MiG-21 would require more frequent tyre and brake pad renewals as each system would be used more frequently than their Soviet counterparts.

On the other hand, New Delhi had nowhere else to go for defence equipment during a time when the mounting bill for foodgrains, fertilisers, oil and steel had virtually wiped out the country's foreign exchange reserves. For example, interest in the Harrier to replace the obsolete Sea Hawks for the Vikrant dates back to at least mid-1973. It came to nothing as the cost would have amounted to at least Rs.100 crores of foreign exchange[52]. Reports that India would acquire the Soviet Yak-36 strike fighter instead to refurbish the fleet air arm were never substantiated. Thus, in the quest to expand the Navy, India was forced to continue its dependent relationship with the Soviet Union. By the end of the decade, therefore, following great political and diplomatic manoeuvering, India had acquired an array of modern naval equipment from the Soviets including 8 F-class submarines, 10 Petya II frigates, 3 Nanchuka corvettes equipped with SSM and SAM missiles, 16 of the Osa class missile patrol boats, which had performed so well in the 1971 war,

50 Rikhye [1975], p.14.

51 The Times [3 July 1970].

52 Malhotra [1973].

coastal patrol boats and minesweepers[53]. However, in keeping with the naval expansion policy 7 Il-38 Mays were procured for long range reconnaissance and, in 1974, the Soviets undertook to refurbish completely the naval base at Vishakhapatnam.

For the Air Force, further expansion and modernisation was barely possible in the early-1970s. Although there was a widespread desire to replace the Canberra bomber and the Hunter, the Soviet Union was unable to fill the gap and other systems were considered too expensive. In fact, interest in the Anglo-French Jaguar as a potential follow-on system emerged as early as July 1968 following an offer by the British Aircraft Corporation which included license production rights of the 'paper' plane[54]. Nevertheless, the increasing age of India's long-range strike force and the implications thereof were not lost on defence planners. In addition, the obsolescence of other aircraft, coupled with the rumour in the mid-1970s that Pakistan might augment its inventory of Mirage-3/5 fighter bombers with a shipment of similar aircraft from Libya, raised the option of acquiring a long-range fighter bomber[55]. In addition to the Jaguar other similar aircraft which came under consideration were the MiG-23, the Swedish Saab-37 Viggen and the French F-1 Mirage.

In the period between the 1971 war and the Janata period, the Army fared badly with regard to the import of equipment but much better in relation to indigenous production. However, its relative share of

53 The Military Balance 1979-80.

54 Flight International [1968].

55 Thomas [1986], p.169.

the defence budget declined. During the 1960s the Army received on average 77.7% of the annual defence budget but by 1973-74 this had declined to 71.1%[56]. Moreover, soaring inflation and rising manpower costs further eroded the Army's purchasing power. Thus, by 1973-74 capital expenditure for the Army had fallen to 38%, some 10% less than for the Navy, as against a mean of 53.4% during the 1960s[57]. Consequently, little in the way of planned or actual procurement actually occurred during the 1970s.

In summary, therefore, it seems that throughout the 1970s India's defence procurement policy was low key, especially with regard to the Army. The only realistic source of equipment given the foreign exchange crisis was the Soviet Union. Although it was well recognised that the country required a more modern deep strike capability, the availability of hardware from the Soviet Union was limited and the foreign exchange costs from elsewhere prohibitive. Where the commonality of interests did occur was in the mutual desire on the part of both the Soviet Union and India to see a stronger Indian blue water navy. For the Soviets this was a means of retaining influence with India, partially countering the US naval build-up in the region, avoiding a strain on US-Soviet relations by disturbing the Indo-Pakistan balance of power through the transfer of ground and air forces and, perhaps, laying the foundations for gaining access to the strategically sited naval base at Vishakhapatnam. For India, it was an opportunity to build upon its dormant blue water strategy, plenish naval power and capitalise upon

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56 Figures extrapolated from Thomas [1986], Table 5.9, p.192.

57 Thomas [1986], Table 5.9, p.192.

but not fill the power vacuum that had emerged following Britain's retreat East of Suez.

5.1.7 The Janata Period - Reduced Dependency and Increased Procurement

Although it was clear that India could ill-afford to modernise parts of the Air Force, nevertheless, a head of steam had built up under discussions for modernisation. Replacement discussions were well advanced when Morarji Desai came to power in 1977. Years before, Desai had held the Finance portfolio in the Nehru Government and he was well known for his reluctance to expend resources on defence, until after the 1962 war.

Politically, the Janata Government framed its policies in a reactive fashion. It was essentially a loose knit coalition which owed its existence to both Mrs Gandhi and the Emergency. Once both had disappeared (Mrs Gandhi, however, kept up an extremely good public profile which served her well in the future) an ideological vacuum occurred which was filled with responsive gestures rather than with a vision of where realistically the new Government could take India in the crucible of international politics. The policies which emerged were very much the antithesis of Mrs Gandhi's. First, Desai rejected India's equivocal nuclear policy and pledged not to pursue the nuclear option, although this fell well short of signing the Non-Proliferation Treaty. Second, the new government attempted to reduce the dependence upon the Soviet Union, a policy which was facilitated by a dramatic rise in foreign exchange reserves. In November 1976

reserves stood at Rs.2403 crores but exactly two years later they more than doubled to Rs.5153 crores[58]. Third, and related to the previous policy plank, the Government attempted to reestablish India's credibility as a non-aligned power.

The new Government continued the policy of its predecessor and kept alive the prospect that India would acquire a deep strike penetration aircraft some two generations beyond the Canberra and the Hunter. Prior to the election of Janata a roll-on plan for 1976-81 had been adopted and the new government honoured the plan. With foreign exchange reserves much higher, the Government could afford actively to consider the Jaguar deal. This had been on ice for a decade, and was only revitalised in theory as a result of Pakistan's procurement of the Mirage-3/5. In addition, India could also play the market and force the major European arms exporters to compete against each other. In February 1978 Defence Minister Jagjivan Ram announced that India was considering the Saab-Scania Viggen, the Dassault-Breguet Mirage F-1 and the Anglo-French Jaguar. From the Soviet side an offer of the MiG-23, the Su-20 and the Su-22 had been considered but was rejected because none of the aircraft were suitable for the intended missions, and questions had been raised about their performance capabilities. The factors which influenced decision makers were unit costs, terms of payment, delivery schedules, licensed production options and offset arrangements[59]. Although it

58 Thomas [1982], Appendix I, p.113.

59 Offset arrangements have become increasingly a part of most arms deals in recent years. Basically, the system works in the following way. Country A will sell to country B and include licensed production arrangements. Country B will include in the deal the option to produce more than is required for domestic purposes and either sell the surplus spare parts to a third country operating the same system or back to the original supplier. In this instance an element of the offset deal

is thought that the IAF favoured the Swedish Viggen in all its variations (reconnaissance, high altitude, interceptor and strike), this option was blocked by the United States. The plane was powered by a Pratt and Whitney engine (a US corporation) which gave the US Government the power of veto[60]. The Mirage was turned down, probably on the grounds of the French relationship with Pakistan[61]. In February 1978 the British Prime Minister James Callaghan visited India with the thinly disguised intention of securing the Jaguar deal and an order for six cargo ships[62]. The visit was preceded by a visit in January from the US President, Jimmy Carter, when the US veto was probably discussed in detail. However, by June it was becoming clear that the Indian Government was coming down in favour of the Jaguar, ostensibly due to the system's low-level navigation capability, range and avionics equipment[63]. More likely, however, the Government was faced with a single option for political rather than technical reasons; primarily a desire to move away from dependence upon the Soviet Union but, at the same time, the choice of alternative suppliers was extremely limited. In October 1978 the Government announced its selection and at the cost of $2.2 billion agreed to purchase 200 Jaguar International aircraft - 40 to be

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involved Britain buying back India's obsolete Canberras and Hunters once the Jaguar entered service (Air International, (December 1978), p 254. For an analysis of the more recent offset trend see Neuman [1985].

60 Nagchaudhri, Conversations with the author (New Delhi, March 1985).

61 For an overview of this relationship during this period see, India Backgrounder [1979].

62 Far Eastern Economic Review [17 February 1978].

63 The Financial Times [28 June 1977].

purchased outright and the rest to be built in India[64]. The announcement came as a relief to both sides. As one source commented, somewhat wryly,

> "Serious negotiations began in 1972 or 1973 and it has been hot and cold ever since, largely on the question of financing."[65]

The importance of the Jaguar deal was that it signified the end of India's low key procurement, heralded the onset of a large-scale modernisation programme and, furthermore, indicated that India was henceforth prepared to buy from whichever source provided the most relevant and superior technology. Or, put another way, India now felt able to reduce its dependency upon the Soviet bloc for defence equipment.

Although little else appeared to be under consideration for the IAF, except the MiG-23 to augment the Jaguar DSPA strike force, in early-1979 a high powered Indian defence team toured Europe to gather information concerning a further modernisation of the Navy[66]. In particular, the team assessed four European shipyards for the ability to provide India with some twenty submarines to replace the eight Soviet Foxtrots currently in service. Uppermost in the minds of the team members was the desire to strike a deal similar to the Jaguar involving outright purchase, technology transfer and offset options. For this, the Government was prepared to consider costs of between

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64 The Jaguar International is the export version of the Jaguar deployed by France and Britain. The key difference is that the International is powered by two Rolls-Royce-Turbomeca Adour Mk. 102 engines which contain 17% more thrust than the standard Jaguar.

65 Aviation Week and Space Technology [16 October 1978].

66 Sharma [April 1979].

$700 and $1,000 million[67]. In addition, interest in the Harrier VSTOL was rekindled, albeit with an upwardly revised price, and the deal was announced in October 1978.[68] In effect, the Government had no choice. The Soviet equivalent, the Yak-36 Forger-A was too much of an unknown quantity, the US Skyhawk was never a serious contender on account of US arms sales policy to the sub-continent and no other system was suitable for the relatively short flight deck on the Vikrant, which at the time did not have a ski ramp.

Around the same period the Army were given the go-ahead to consider a new generation main battle tank. Although the West German Leopard II and the British Chieftain V were considered, competition with the Soviet T-72 never appeared really serious as 100 units had already been procured whilst the evaluation of the former tanks was in progress. Also under consideration during this period was a replacement for the Czech OT-62 armoured personnel carrier, a decision which also came down in favour of the Soviet BMP-1 with the only close contender being the less well armed but faster and more expensive West German Mander[69].

Clearly, the Janata Government was extremely serious in their attempts at an across-the-board modernisation of India's defence capability. The motivation appears to have been primarily technological, although there were strong but unsubstantiated hints of corruption over the Jaguar deal, involving commissions totalling

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67 Marshall [1979].

68 Air International [December 1978], p.254.

69 India Backgrounder [July [979], p.1802.

£56.8 million[70]. However, the bulk of the allegations were made ten days before Prime Minister Charan Singh sought a vote of confidence in Parliament[71]. Unquestionably, there were few security considerations which required urgent attention and, also, little attempt was made to justify the process on these grounds,

> "The modernisation programmes for the three services will take at least three years to carry out, but there is no hurry since India does not expect an immediate threat from across its borders. China is still showing signs of wanting to mend fences and the threat from Pakistan is no longer serious because internal upheaval rules out military adventures. The main purpose of the Defence Ministry's multi-pronged effort is to keep abreast of the latest advances in defence technology and to begin preparations immediately to face the expected strategic challenges of the 1980s."[72]

5.2 Nuclear Weapons Policy

5.2.1 India and Nuclear Weapons: The Importance of the 1970s[73]

Any discussion of India's defence policy over the period in question cannot ignore the significance and impact of deliberations over the direction of India's nuclear weapon programme. Equally, the decision to eschew one of the major multilateral arms control initiatives of the period, the opening for signature of the Non-Proliferation Treaty

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70 Sharma [August 1979].

71 International Herald Tribune [11-12 August 1979].

72 Sharma [April 1979].

73 For a broader analysis by the author of India's policy towards nuclear weapons and the nuclear proliferation situation in South Asia generally see, Smith C. [1984], and, Smith C. [1987].

(NPT) in 1968, should also be considered. Both affected India's foreign policy and its relations with foreign powers, especially the two superpowers. One advantage of possessing nuclear weapons is the implied capability to reduce or fetter expenditures on conventional forces on account of the considerable firepower and deterrent value afforded by either free-fall nuclear bombs or nuclear missiles. Whether or not this was debated within military or political circles must also be examined.

Successive Indian governments have always displayed a distinct ambiguity towards the question of whether or not to include nuclear weapons in their force structure. As indicated in the previous chapter, Nehru was equivocal in principle although there is no suggestion that had he been confronted with a real option that he would have accepted the need for a nuclear deterrent. However, against this must be set the considerable ignorance amongst policy makers throughout the world at that time - nuclear weapons were seen as contiguous to large conventional weapons rather than the qualitatively different, awesomely powerful and destructive weapons that we now more correctly consider them to be. The extent of Nehru's ambiguous policy towards the nuclear option was reflected to a statement he made to the Lok Sabha on 10 August 1960,

> "So far as we are concerned, we are determined not to go in for making atomic bombs and the like. But we are equally determined not to be left behind in this advance in the use of this new power."[74]

Homi Bhabha, a brilliant scientist and the father of India's nuclear weapon programme, used both his personal power base (which stemmed

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74 Quoted in Kapur [undated], p.17.

from his pre-eminent position within the scientific bureaucracy during the 1960s) and his personal relationship with Nehru to advance the nuclear power programme and keep open the option to produce nuclear weapons. From 1948 until his accidental death in January 1966, Bhabha was the director of India's atomic energy programme and largely responsible for keeping the military option open during a period when internationalism rather than narrow self-interest dominated the opinion shaping process in this area.

Three factors influenced interest in nuclear weapons during the mid-1960s. First, the 1962 war made its impact in this arena as it did in others. Second, the death of Nehru permitted a new and more hawkish political debate on the defence options open to India. Third, in late-1964 China successfully conducted a nuclear test which offered the Government an excellent case for keeping open the nuclear option. Bhabha was quick to take the opportunity to convince both government and the public that 'The explosion of a nuclear device by China is a signal that there is no time to be lost'[75].

After this time and up until the nuclear test in 1974, public opinion appeared increasingly to favour the pursuit of nuclear weapons. According to public opinion surveys conducted in Delhi, Calcutta, Bombay and Madras throughout the late-1960s, strong support existed in favour of going nuclear. Indeed, the urban-based, conservative party, the Jana Sangh, was the most outspoken pro-bomb party. Strength of feeling in favour of the bomb was particularly strong in Delhi[76]. However, in a survey of the attitudes of Indian élites to

75 Jain [1974], pp.158, quoted in Jones [1985], p.109.

76 Jones [1985], p.108. Jones uses data from Monthly Public Opinion Surveys [1974].

both the bomb and the NPT, Ashis Nandy identified a stronger anti-bomb sentiment (53.7%) than existed in the public domain but, on the other hand, an extremely strong and unqualified antipathy (68.9%) towards the Non-Proliferation Treaty (NPT)[77].

It was both the weight of public and Congress opinion and the inherent shortcomings of the NPT which persuaded Mrs Gandhi not to make India a signatory. No conflict existed in adopting a stance which was anti-bomb on the one hand and anti-NPT on the other. The anti-bomb sentiment amongst élites stemmed from several quarters, notably the Gandhian legacy of pacifism and the Nehru legacy of internationalism. Over time the potency of the anti-bomb lobby declined and the growing equivocation of this quarter contrasted strongly with the burgeoning, strident support for developing nuclear weapons amongst the pro-bomb lobby. Furthermore, this perspective was juxtaposed with a growing opinion in favour of isolationism.

Condemnation of the NPT was relatively straightforward. The NPT was something of an arms control flagship during the 1960s and represented a carefully negotiated but highly compromised treaty designed to prevent the horizontal spread of nuclear weapons. Its success rested on a fundamental clause which required the states in possession of nuclear weapons to make every effort at the earliest date to reduce their stockpiles of nuclear weapons. Or, put another way, the non-nuclear states would only forego the option to go nuclear on the understanding that meaningful and discernible disarmament measures would be taken by France, Britain and China and

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77 Nandy [1972].

the superpowers. Indian public opinion and voices within government doubted the sincerity of this commitment, a view which was more than vindicated in later years given the persistent prevarication over East-West arms control issues, the recent Intermediate Nuclear Forces (INF) agreement notwithstanding. The reciprocity factor has always been a fundamental sticking point in NPT review conferences, held every five years, and may yet be the problem which prevents the survival of the non-proliferation regime into the 1990s. Indian strategists may also have concluded that the bifurcation between the haves and have nots and the relative power of the former group placed India in a disadvantageous position vis à vis China. Internally, bureaucratic support for rejecting the NPT may have stemmed from the desire not to eliminate a major counter-balance to the poor performance of the nuclear energy industry - whilst the bomb option is kept open the nuclear energy programme must continue.

Despite the fact that the NPT was an important goal of Soviet foreign policy in 1968 (perhaps designed to offset the international condemnation engendered by the invasion of Czeckoslovakia which took place a month after the treaty opened for signature) and pressure was placed upon India to adhere, the Indian Government refused to sign - Mrs Gandhi read the public mood well. The definitive act of rejection had the twin effects of stimulating and legitimising a debate on the nuclear option and, duly, the clamour for a test increased.

From the Government viewpoint, there was growing concern during this period over the Soviet Union's integrity as a loyal ally. Détente between the superpowers, closer Soviet-Pakistan relations and Sino-

American rapprochement sharpened the perception that India could on no count afford to place an element of its security in the hands of others, however powerful.

The nuclear weapon programme in India probably began after the Chinese test in 1964. Although evidence that the programme started at this point is scarce, such a reactive response was widely considered to be inevitable. In all probability India possessed the capability to conduct a nuclear test in the late-1960s but chose not to do so until 1974 when a nuclear device with a yield of 12-15 kilotons equivalent was successfully exploded near Pokhoran, a small town in the Rajasthan desert. Exactly why the test was conducted in 1974 is not clear. Possibly, Mrs Gandhi's declining political fortunes during that period, which included tensions between the Centre and the States of Gujarat and Bihar and a national rail strike, a desire to influence the forthcoming 1975 NPT Review Conference and a sense of regional power were contributory factors. It is also clear that a bureaucratic and technocratic head of steam had built up in favour of a test.

However, although the test was successful and warmly welcomed throughout the country, the strength of international condemnation was unequivocal. From the outset, the international community, including the Soviet Union, was singularly unimpressed by the protestations of the Government that the test was a bona fide peaceful nuclear explosion designed to keep the country abreast of technological developments in the fields of mining and earthmoving operations[78]. The plutonium for the test could only have come from

78 SIPRI [1975b], p.16.

the research reactor at Trombay, a heavy water reactor that burned natural uranium and produced plutonium. India had acquired the CIRUS reactor in 1955 from Canada on particularly beneficial terms, financial and otherwise; the Canadian Government had stipulated that the reactor should be used for peaceful purposes only and, on the understanding that India had accepted this condition, no discussion of safeguards took place[79]. The Canadian Government was deeply offended by the test and along with the rest of the international community considered that the spirit of the Non-Proliferation Regime and what remained of the 'Atoms for Peace' ideal had been severely compromised. Soon after the test the Canadian Secretary of State for External Affairs issued a firm statement of protest which concluded,

> "(Canada) fully respects India's sovereignty and independence in all matters. It cannot, however, be expected to assist and subsidise, directly or indirectly, a nuclear programme which, in a key respect, undermines the position which Canada has for a long time been firmly convinced is best for world peace and security."[80]

Two years later the Canadians withdrew all cooperation for and assistance to India's nuclear energy programme.

The United States and France were also involved by virtue of previous aid agreements. The Americans had trained more than 1,300 nuclear scientists and technicians from India and had also extended subsidised loans and research grants for both applied and pure research in this area. The United States thereafter refused to supply spare parts and enriched uranium for the Tarapur power station and in so doing revoked the bilateral agreement of 1963 which

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79 Goldschmidt [1983].

80 SIPRI [1975b], p.21.

extended American cooperation in nuclear energy for thirty years, an issue which has conditioned bilateral relations ever since. France had also entered into similar agreements but showed altogether less concern than the two North American states[81].

The Indian Government's somewhat weak protest that the test had been conducted without any form of foreign assistance made little difference. In the space of two years India had lost most of the foreign assistance for its nuclear energy programme. Although the programme continued, rigorous sanctions, lack of sufficient foreign expertise, the dispersal of many bright young Indian scientists to the West and pronounced managerial problems combined to slow the pace of the Indian nuclear programme to a virtual standstill by the turn of the decade[82].

During the Janata period a very different policy towards nuclear weapons was articulated. In keeping with the overall strategy of negating the policies adopted by Indira Gandhi, Prime Minister Desai attempted initially to reject unequivocally not just the nuclear option but nuclear testing as well. This was in part an attempt to win back the technical cooperation lost from the United States, although President Carter was less than accommodating on this issue. It was also a reflection of Desai's deep commitment to the ideals of pacifism, internationalism and, perhaps, prudent housekeeping[83]. In

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81 Weissman and Crossley [1981], p.131.

82 In 1970 the Department of Atomic Energy estimated that India would have 2,700MW of installed nuclear power capacity. By 1980 installed capacity was no more than 240MW.

83 Subsequent estimates of the scale of financial resources required suggest that the Government would have to find an extra

June 1978 Desai announced that India would no longer engage in nuclear testing, whatever the policies of other countries - the 1974 test had prompted Pakistan to step up the military dimension of its nuclear programme, which had first become evident in 1972[84]. Strong political objections from within Janata and other political parties forced a volte face and a month later Desai was forced not to rule out the possibility of testing for peaceful purposes. Three days later, however, the Prime Minister directly contradicted himself and gave assurances that under no circumstances would nuclear testing take place, at least whilst the Janata party was in power[85].

With the benefit of hindsight the 1974 nuclear test was a major policy mistake for India, although at the time the scale and intensity of international condemnation and the sanctions which followed could not have been foreseen. It cast India dangerously close to pariah status and negated much of the country's credibility throughout the world. This apart, however, it is apparent that the motivation behind the nuclear test was primarily if not exclusively political. At no point does it seem that military considerations and problems were considered and no discussion appears to have taken place between Government and the military as to exactly what the country would do with such a capability once a positive decision had been taken to produce nuclear weapons. This was perhaps because the armed forces are less enthusiastic about a nuclear India than their

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$15 billion over a ten year period to fund an unambiguous nuclear weapon programme. Sen Gupta [1983], pp.23-27.

84 The literature on Pakistan's nuclear weapon programme is extensive. However, for a succinct review of the programme see, Kapur [1987].

82 Thomas [1986], p.108.

civilian counterparts. Not only would a nuclear arsenal cut deep into the procurement budget and reduce the resources available for conventional defence but, equally important, the military would effectively lose bureaucratic turf, given that the threatened or actual use of countervalue nuclear weapons is more a political than a military decision: the latter are primarily used to destroy population centres not military targets. Nor was there then or has there been since any discussion concerning the assimilation of nuclear weapons into the Indian defence forces - which service would assume control, how conventional and nuclear forces would interface and how deterrent capability could be maximised.

5.3 Indian Defence Policy 1962-1980: Answers in Search of Problems

During the 1960s and 1970s India's defence posture expanded significantly, given the paucity of foreign exchange reserves, the parlous state of the economy and domestic political upheaval. However, as the defence postures evolved it does not seem clear as to what decision makers and planners were seeking - clear policy guidelines appeared to be lacking.

First and foremost, the post-1962 political atmosphere left Indian leaders in no doubt that substantial changes were required in the defence sector. To allay public doubts and fears remedial action in the form of extra allocations was an understandable gesture to ensure the political survival of the Congress Party. However, the new guidelines of 1964 notwithstanding, Nehru appeared not to see the need for a wide-ranging defence review. India lost the 1962 conflict

with China because of incompetence, both before but especially during the short war. The defence sector may have been lacking in certain areas which could otherwise have allowed the armed forces to fare less atrociously, such as better aircraft, infantry weapons and artillery. However, the root cause of the defeat was poor defence organisation and a failure to ensure an adequate defence capability in the North-east, a lack of training for high altitude warfare, poor decision making at the political and intelligence levels, which resulted in the Chinese threat being taken altogether too lightly and, finally, inadequate combat capability.

In 1964 the Indian Government sanctioned and allocated resources for a new defence capability based upon high altitude warfare training. It also endeavoured to reduce the institutional cleavages between the three services. However, essentially, the Government looked for technical and matériel solutions to political and organisational problems. Instead of seeking the aid of the UN Security Council over the border dispute, India sought military aid instead. True, any Security Council resolution would have been totally ignored by Communist China, given that the Government was not recognised by the UN during that time. Also, the involvement of the UN would have been embarrassing for India, given the long-standing failure to comply with the UN ruling over Kashmir in favour of a plebiscite. However, given Nehru's predilection for the resolution of conflict by multilateral negotiating mechanisms, the failure to involve the UN and attempt a peaceful settlement in principle suggests double standards on the part of the Nehru Government. It seemed that Nehru's pleas for peaceful solutions to international conflicts did not apply in a regional setting. The benefit of involving the UN

would have been more than cosmetic. By permitting an international bureaucracy to take its stand, India would have captured the moral high ground for the years to come, just as Pakistan had done fifteen years earlier over Kashmir.

The defence build-up which followed the war essentially masked deeper problems and may even have created more. The weakness of foreign policy formulation and intelligence gathering was not given the salience it deserved. Instead, military technical solutions were sought, rather than a review of foreign policy formulation and decision making. Within the defence sector itself, there were similar misperceptions. Rather than review defence policy with a view to ensuring that India was better defended, policy makers assumed that an increase in the strength of all the three services was the primary requirement. Conceivably, organisational changes and cost-benefit analyses could have led to a stronger defence and major rises in defence expenditure beyond the need to assuage public opinion could have been avoided. In the absence of a really effective policy making process, the armed forces were permitted to preside over a rather haphazard rearmament process, just as they did in the years before the war.

The full negative effects of the defence build-ups both before and after the 1962 war were not felt for many years, although Rubin has argued that increased defence requirements after 1962 were the single cause of the largest growth in tax revenues since independence[86]. Where problems first began to occur was after the 1970s when the need for replacement and modernisation became evident but the Government

86 Rubin [1982], p.183.

lacked the foreign exchange reserves and the political mandate to engage the country in a new defence build-up, the more so following the dismemberment of Pakistan. Consequently, Mrs Gandhi was forced into the Soviet camp and finally into a Treaty of Co-operation and Friendship. Thus, in political terms the haphazard policy making process in the years between 1947 and 1962 eventually compromised significantly the policy of non-alignment. It also led to a marked dependence upon the Soviet Union and established a patron-client relationship of a similar intensity to that of the United States and Israel.

When the Janata Party came to power, it had no clear vision of which way to take defence policy after a decade of burgeoning dependency upon the Soviet Union, witness in particular the extreme confusion over India's nuclear weapon policy. On conventional defence modernisation, the new Government was singularly unambitious. Once again the patterns of the past were repeated. There were no calls for a wide-ranging defence review. Parliamentary debate was lacking in the extreme. Nobody in Parliament seemed to question the lack of fit between defence and foreign policy. Moreover, as arms imports began to appear from a diverse array of suppliers to break the dependency upon the Soviet Union, nobody questioned the economic costs or the potential operational problems which could emerge from a defence capability drawn from so many different areas.

In contrast, the élites of India, the Press and all other interested parties seemed content to see the country move gradually towards the attainment of regional power status, even if this implied an increased reliance upon the Soviet Union, despite the ambivalent

attitude towards the Communist bloc. The durability of the national consensus for medium power status at least was fully borne out by the reaction to the nuclear test in 1974. It was a popular decision taken by Mrs Gandhi even though it cast the country so close to the periphery of the international community whereas before India had been in the vanguard of the attempts to attain a more stable and less violent world order. In addition, the developmental costs entailed by foreclosing access to nuclear technology were also considered to be worthwhile.

Throughout the years between 1962 and 1980 defence policy drifted away from the basic need to acquire security into a poorly thought out policy of acquiring the symbols required by a regional power. The naval build-up, for example, reflects well the policy of drift. Although an opportunity arose with the departure of the British Navy, India was ill-equipped economically to undertake the blue-water mission, with or without the backing of the Soviet Union. Rather than heed the lessons of the 1962, 1965 and 1971 wars which indicated the marginal utility of either a brown or a blue water naval capability in a conflict with either Pakistan or China, the Indian Government pressed ahead during a period when the economy was weak and the international climate had ceased to favour military aid.

By the time Mrs Gandhi was returned to power, it became clear that all the three services were in need of attention, despite or perhaps because of the rate of procurement over the 1970s. True, the Janata Government had put into motion a form of modernisation but not, it seemed, after due policy debate, threat assessment and consideration of the short- and long-term policy implications. Mrs Gandhi merely

picked up where Morarji Desai had left off and only after an agreement had been reached to modernise the armed forces did the Government begin to articulate new fears from new quarters, such as the superpower build-up in the Indian Ocean and the new Cold War. As will be seen, the defence postures which followed were even more unwieldly and irrelevant than those of the 1960s and 1970s and seemed more geared to seeking problems to justify acquisitions, rather than vice versa.

CHAPTER SIX

INDIAN ARMS IMPORTS 1980-1988

6.1 The New Cold War and Afghanistan

1980 was a watershed in post-Second World War international affairs. The fragile détente which existed between the two superpowers during the late-1960s and early-1970s ended finally when the Soviet Union invaded Afghanistan in December 1979. This was the first time that the Soviet Union had invaded a nation state outside its recognised sphere of influence or in South Asia and the ramifications were extensive. Tension between the two superpowers and their allies was further exacerbated when a resurgence of trade union activism in Poland prompted a heavy handed response from Moscow and an equally strident condemnation from the West.

On the other side of the Iron Curtain a new radicalism emerged in the United States and, to a lesser extent, other NATO countries. A significant amount of change had already occurred in the late-1970s, particularly in the US. Former President Carter attempted to redress perceived weaknesses within NATO by demanding with some success that on the one hand all NATO countries raise their defence expenditures by 3% in real terms. On the other, an attempt was made to bind the Western alliance together and simultaneously counter the Soviet deployment of SS-20 medium range nuclear missiles through strengthening intermediate range nuclear weapons in the form of the technologically advanced Pershing II missiles and the near

revolutionary cruise missile. At the same time, in keeping with the 'dual-track' policy, NATO tried to force the pace on arms control. Following the anticipated success of the SALT II talks NATO wanted the Soviets to remain at the negotiating table over the short period when NATO would have enjoyed a clear nuclear superiority. However, after the Soviet invasion of Afghanistan, Congress refused to ratify the SALT II Treaty.

The humiliation and impotence felt by the United States during the internment of American hostages by the Khomeini Government contributed to a crushing electoral defeat for Carter in the November 1980 US presidential election. The outcome of the election was far from just a victory for the Republican Party and Ronald Reagan. It was also a triumph for the New Right and an opportunity to reshape US foreign, defence and domestic policies following a decade or more of perceived decline and national humiliation - Viet Nam, Watergate, and Iran.

The re-emergence of Cold Warriors in some of the major capitals of the western world coupled with knee-jerk reactions by the Soviet Union to its regional and peripheral problems had a profound effect upon not only East-West relations but the international system as a whole. In addition, the international debt crisis, a growing awareness of the extent of environmental problems, a crisis of multilateralism which left many major international organisations in disarray, broad based economic recession which exacerbated the impact of the debt crisis, reductions in bilateral aid and the burgeoning budget deficit in the US added to the level of concern over the state of the international system. In effect, during a period when

multilateral solutions were required to solve the problems engendered within an increasingly interdependent international system, the direction of change turned in favour of unilateral and bilateral measures and a resolve on the part of the major powers to regain security through the pursuit of relative military power, whatever the cost.

Against this bleak backdrop Indira Gandhi was re-elected in India following the collapse of the Janata Government. As with previous Indian elections, the external regional and international setting played a negligible part in the choice of candidate or party. Indian elections are extremely parochial events which is due as much to the complexity of the political culture within the country as it is to the relative ignorance of Indian voters on events outside national boundaries.

However, the new Cold War impinged upon the Indian sub-continent in three direct ways forcing the new government to respond. First, the Soviet invasion of a country within the sub-continent confronted India with some awkward policy choices, particularly given the level of international condemnation which the event engendered. Second, started under Carter but pursued with a great deal more commitment by the Reagan Administration, the evolution of the Rapid Deployment Force and deployments at both Diego Garcia and several Indian Ocean littoral states presented India with new perceived security threats from the Indian Ocean. Third, the decline in East-West relations and the invasion of Afghanistan was paralleled by an emulation of the containment and forward defence policies pursued in the 1950s. This led directly to the extension of a massive economic and military aid

package to Pakistan, the first tranche amounting to US$3.2 billion[1]. Apart from securing the immediate political survival of President Zia, the aid package facilitated the procurement of advanced military technology, notably 40 F-16 air combat fighters and the Abrahms MI main battle tank.

Although the military aid was intended to provide a first line of defence against further Soviet expansionism, the US-sponsored defence build-up created intense suspicion in New Delhi. With some justification, few believed that the Kremlin intended Afghanistan to be the first step in either the acquisition of warm water ports or the initial step towards the subjugation of South Asia[2]. Given too that Pakistan is a narrow country (see Chapter Four), US-Pakistan protestations that the new defence equipment was intended solely for the defence of Pakistan's north-west border were greeted with scepticism within India - forward defence may have been uppermost in the minds of American decision makers but President Zia undoubtedly had India in mind. Nor was New Delhi happy with the fact that the F-16 is capable of delivering nuclear weapons or that Pakistan received a controversial waiver on the Symington Amendment, which forbids Congress to extend military aid to a country which is known to be producing nuclear weapons. The failure on the part of the US to

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1 President Carter was only prepared to offer $400 million of aid, which President Zia rejected as 'peanuts'. His arrogance towards the US indicates how much he recognised Pakistan's renewed geo-political significance.

2 The approach of those who read most into the Soviet invasion is succinctly summarised by Amaury de Riencourt, "The Russian venture is one further step in a long-term process which aims at reaching the warm waters of the Indian Ocean. The prospects are even more tantalizing in the latter part of the twentieth century than they were in the nineteenth, in the days of Kipling's 'Great Game'", De Riencourt [1982], p.431.

recognise Pakistan's intentions in this direction was made all the more worrying for New Delhi as Islamabad made all too little attempt to conceal the military side of the nuclear programme. Indeed, in 1987 Pakistan's cavalier attitude to this sensitive subject was fully revealed when, immediately prior to Congressional agreement on the second tranche of military and economic aid, A.Q. Khan, the father of Pakistan's nuclear weapon programme, admitted in an interview that the nuclear establishment could offer General Zia a nuclear weapon if so requested[3].

The Soviet invasion of Afghanistan presented Mrs Gandhi with a considerable problem. With a forthcoming New Delhi meeting of the Non-Aligned Movement (NAM) scheduled for February 1981 and with herself in the chair, she could not be seen to support the Soviet Union's actions, which thus required an unequivocal statement in the 1980-81 Report of the Ministry of External Affairs,

> "India's position was clearly enunciated on several occasions - namely, that it was opposed to the presence of foreign troops and bases in any country and that all forms of intervention and interference in the internal affairs of Afghanistan must cease."[4]

At the same time, however, the Prime Minister did not wish to alienate the Soviet bloc during this particular period. Apart from respecting the cordial relations which had gone before, Mrs Gandhi may also have been aware that the completion of the defence

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3 Pakistan's behaviour on this question appears to many as reckless, considering the risk involved in losing billions of dollars worth of military and economic aid. However, it is possible to see Pakistan's behaviour from another perspective, as a calculating and subtle attempt to legitimise by default a nuclear weapon capability and so move closer to the Israeli position on nuclear weapons. For an analysis of similar behaviour patterns during negotiations for the second tranche of military and economic aid see Smith, C. [1987].

4 Ministry of External Affairs [1981], pp.iv-v.

modernisation programme and the perceived need to counter the newfound friendship between Pakistan and the US would require considerable assistance from the Soviet Union. Nor could she have forgotten the magnitude of non-military Soviet aid entering India and the need for steady increases in the future[5]. Her response in 1980 was, therefore, measured. India's role in the NAM and its genuine antipathy to this type of force and subjugation, witness the policy adopted following the Soviet invasion of Czeckoslovakia in 1968, prevented a response in press statements and UN fora which could have been construed as acquiescent[6]. Equally, India adamantly refused to condemn outright Soviet actions. Whilst gestures of support would have been wholly out of place, New Delhi reacted with forbearance to the invasion following what the Prime Minister referred to as 'a realistic look at the situation'[7].

The new situation in South Asia, set against a series of disturbing developments between the two superpowers and around the sensitive region of the Persian Gulf, created a complex problem for New Delhi primarily because of linkages from the regional to the international level. First and foremost, the US interest in Pakistan had been revived and Zia could henceforth rely upon a wide-ranging defence modernisation programme on reasonable terms. For India, the consolidation of US-Pakistan ties exposed the sub-continent to the vissitudes of wider international events over which it had little or

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5 According to the US Dept. of State, economic credits and grants to India have increased dramatically in recent years. In 1983 the figure stood at $140 million but by 1986 had risen to $2,125 million. Department of State [1988], Table 8, p.9.

6 For example, Wigg [1980].

7 Quoted in Horn [1982], p.183.

no control. Second, there existed the complex linkage between Pakistan and both Saudi Arabia and Iran. During the 1960s Pakistan greatly assisted Saudi Arabia and Jordan in defence training[8] - indeed, Zia himself acted as an adviser to the Royal Jordanian Army between 1969 and 1981[9]. In return, Pakistan gained financially from its relationship with the Gulf States. Obversely, Zia was careful not to alienate Iran during the Gulf War as defeat for the latter could have led to ethnic problems along the common border in the absence of strong central governments. Moreover, the defeat of Iran would have left Iraq in too strong a position in the Gulf[10].

Consequently, as Mrs Gandhi sought to consolidate her power at home a new set of foreign policy considerations emerged for Indian policy makers. Would Pakistan flex its new found military muscle given the compliant attitude adopted by the Reagan Administration? If events in the Gulf were to take an adverse turn, would South Asia become involved in some way? Would the new Cold War spill over further into the Indian sub-continent? How could India preserve its relative naval power and all it represented in the midst of an unprecedented superpower build-up in the region? Would the US seek further basing rights in Baluchistan (Pakistan), Chittagong (Bangladesh) or at the tank farm in Trincomalee (Sri Lanka)[11]?

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8 By the mid-1980s some 30,000 Pakistani troops were stationed throughout the Middle East - 10,000 in Saudi Arabia and the rest in Libya, Oman, United Arab Emirates and Kuwait.

9 Who's Who [1982], p.1174.

10 Robertson [1987], p.169-175.

11 In 1981 the US Secretary of Defence, Casper Weinberger, visited both Pakistan and Sri Lanka which fuelled suspicions that basing rights were high on the agenda. Also, during the same period it was alleged that an agreement had been reached between Sri Lanka and the US to develop in Sri Lanka a 'rest and recreation'

Indian decision makers certainly did respond to these changed conditions. In addition to the modernisation programmes sanctioned by the Janata Government, procurement rose substantially and the export equipment available from several major buyers in the West and the Soviet Union underwent consideration and evaluation. Initially, the process of continuity with the Janata Government turned on a five year defence plan adopted in May 1980 and a major defence review in May 1981, shortly before the US Congress acceded to the Reagan Administration's proposed aid package to Pakistan, but not before it became evident that a substantial commitment was on the horizon[12]. The result was an open season for the defence sector during which India imported Western and Soviet defence equipment on an unprecedented level. It was a conventional defence build-up of enormous width and depth which proceeded apace largely unnoticed both within and outside India. Throughout the 1980s all the major defence exporters attempted to establish a toe-hold in the Indian market during a period when demand in other parts of the Third World was declining precipitously. Only in mid-1988 did it become apparent that the modernisation programme which had endured for nearly a decade was on the decline. In the 1988-89 defence budget, aggregate allocations were raised by only Rs.10 billion which represented a nominal increase but a backward step in real growth terms. Whilst all three services received overall increases, their combined capital outlay actually declined from Rs.39,777.9 million in the previous

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facility for the US seventh fleet, Times of India, [9 August 1981].

12 Negotiations for military and economic assistance package were successfully concluded in September 1981. Full details of the deal can be found in Cronin [1987].

year to Rs.38,721.2 million[13]; additional resources would have been required for imported goods such as fuel and lubricants and armed forces pay awards.

6.2 The Indian Response

India emerged from the 1971 war with a keen sense of destiny but without the foreign exchange resources to turn strategic opportunity and political vision into reality through the acquisition of the type of defence technology which would identify India as a major Asian power and, indubitably, as the power broker in South Asia. In addition, much of the defence equipment deployed by India was in urgent need of modernisation. Following economic recovery in the late-1970s, the Janata Government was able to bow to many of the pressures coming from the defence sector once foreign exchange reserves became stronger. When Mrs Gandhi was re-elected, the economy still appeared reasonably strong, at least until the 1982-83 monsoon failure which cut the annual growth rate to 1.8%. In the previous two years, growth rates reached 7.5% in 1980-81 and 5.2% in 1981-82[14]. However, against this must be set double figure inflation rates during this period and a negative growth rate of -4.8% in 1979-80.

Continuing relative economic strength permitted the Prime Minister to accept further defence modernisation and realise more of the potential afforded by India's victory in the 1971 war. Yet, there

13 International Defense Review [May 1988], p.478.

14 Thomas [1986], p.215.

was a significant lack of fit between the new threats as defined in New Delhi, however vaguely, and the type of defence equipment sought by India, particularly with regard to naval expansion. Throughout the early-1980s Congress(I) politicians were persistently alluding to 'gathering war clouds', 'the imminent threat of war' and, of course, the responsibility of a 'foreign hand' in the destabilisation of India and the sub-continent[15].

In fact, the scale of the programme was more than modernisation alone; the rationale was much wider and found expression in the so-called 'Indira Doctrine'. Since 1971 India had been the de facto regional power in South Asia but needed to express power as much as consolidate it. This could come only by serving notice on both the other South Asian countries and their allies that India would henceforth claim a vital interest in instabilities in South Asia and a right to intervention to protect India's own secularity from the potentially damaging spill-over effects of ethnic disturbance and religious fundamentalism. Using primarily the euphemism of 'non-alignment', a mantle which India could not have worn in any convincing way since 1971, Mrs Gandhi set out an agenda based upon the illegitimacy of foreign bases in South Asia, 'demilitarisation' of the Indian Ocean - a thinly veiled attempt to eliminate superpower presence in the region - and, most important, bilateralism as a means of undercutting relations between hostile neighbours and extra-regional powers, such as China and the US. It was, in essence, a bid for great, even superpower status which entailed assuming the role

15 An excellent cartoon in the Indian Express around this period depicted a senior politician moving away from a microphone having just finished a campaign speech. Half-way back to his seat he turned back towards the crowd saying, "And by the way, I forgot to mention, there's an imminent threat of war".

nearly attained by the deposed Shah of Iran. At the same time this also required driving a wedge between the US and Pakistan lest the relationship both erode India's relative power and bring foreign troops into South Asia.[16] The extent to which India saw other South Asian countries as 'back yard' problems is reflected in K. Subrahmanyam's[17] attitude in 1984 to the ramifications of the emerging Sri Lankan problem,

> "There is no possibility of Sri Lanka doing anything militarily against India. But there is the possibility of [Colombo] going to the US, Israel or Britain for various kinds of assistance or training of troops. And if we permitted this it would give the wrong kind of impression of how far Colombo can go in dealing with its Tamil problem."[18]

Such a policy could scarcely carry weight without the military symbols of great power status which, in this instance, required state-of-the-art military technology and weapons systems commensurate with international power - modern long-range bombers, aircraft carriers, nuclear powered submarines, even nuclear weapons. With the exception of pursuing the nuclear option, this was the task which the Prime Minister set herself in 1980 and 1981.

In May 1980, less than six months after her re-election, Mrs Gandhi secured an arms supply agreement with the Soviet Union which amounted to the transfer of $1.63 billion of defence equipment giving India a two year grace period and then fifteen years to repay the aid (as

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16 For an incisive and very critical review of Indira Gandhi's view of India's future role in South Asia and the political culture which underpined it see Nations [August 1984].

17 K. Subrahmanyam is a well known Indian defence analyst who was until recently Director of the Institute for Defence Studies and Analysis. His views are generally regarded as 'hawkish', especially on nuclear issues, but they often parallel those of the Government.

18 Nations [August 1984], p.26.

opposed to the ten year repayment period offered by Western suppliers), at an interest rate of 2.5%. All repayments could be made in local currency or goods, whereas all other suppliers required payment in hard currency. The central feature of the deal concerned the T-72 tank and the MiG-25 Foxbat, probably in its reconnaissance version only, but also included air-to-air and Frog-type surface-to-surface missiles, Petya-class missile patrol boats, anti-tank weapons and electronic equipment[19]. Negotiations on this deal were started by the Janata Government[20]. Apart from the enviable repayment conditions the deal was further characterised by an unusual willingness on the part of the supplier to discuss technology transfer. Equally important, this deal came at a time when Pakistan had received an offer of credit only totalling $400 million for arms repayable at 11% interest[21]. Agreement on the massive economic and military aid package was nowhere in sight at the time.

The deal with the Soviet Union was swiftly followed by a rare press conference given by the Prime Minister over the course of which she intimated that her Government was on the verge of a heavy defence spending programme[22]. In the next budget Finance Minister Pranab Mukherjee announced a 20% increase in defence expenditure to be financed by increased taxation[23]. Soon after the budget the combined effect of these moves was to bring the representatives of all the major arms exporters from the West to New Delhi. From this point on

19 Honsa [30 May 1980].

20 MILAVNEWS [April 1980], p.16.

21 Honsa [30 May 1980].

22 Sharma [11 August 1981].

23 Financial Times [1 March 1982].

the Indian Government manipulated what became increasingly a buyer's market with considerable finesse.

In October 1980 an Indian defence team visited the USA and the occasion was followed by speculative reports that a $340 million deal had been signed for the supply of 230 light-weight, long-range howitzers and a large number of TOW (tube launched, optically sighted, wire-guided) missiles for the Indian Army[24]. Some months later it was rumoured in Delhi that India had turned down an earlier offer from the US to supply India with the F-16 and co-production of the F-5G intermediate fighter. Although the US had been interested in the Indian arms market for some time nothing more was heard of or reported on this deal. The Government's intention was probably to serve unequivocal notice upon the Soviet Union that the policy of diversity would continue.

In March 1982 Soviet Defence Minister Marshall Ustinov undertook a six day visit to New Delhi. He was accompanied by the largest and most senior defence team ever to visit a country outside the Soviet bloc. The upshot of the visit was the promise of T-80 tanks and the Mig-27 Flogger tactical strike fighter. The real or purely provocative plan to consider importing American defence equipment coupled with the previous report that India was actively considering a number of arms deals with the French including the Mirage 2000 (comparable to the MiG-27), Exocet missiles and Super Puma helicopters appeared to have worked. During such a tense period in US-Soviet relations and given too the Soviet Union's spectacular lack of success in acquiring basing rights in the Indian Ocean to counter

24 The Statesman [14 October 1980].

the US, the Kremlin needed all the allies it could acquire, with massive arms imports or otherwise[25]. Soon after, in June 1983, Defence Minister Venkataraman visited Moscow to discuss the possibility of acquiring the MiG-29 interceptor as a counter to the F-16. The significance of the request rested in the fact that the plane had yet to enter Soviet service. Later reports suggested that the Soviet response had been favourable[26]. As and when details of the deal became more widely known it seemed that the Indian success went beyond the MiG-29 and also included a licensed production option on the T-80 tank and MiG-31 Foxhound fighter[27].

Despite or even because of successes with the Soviet Union, the Indian Government continued to entertain export offers from the West. In May 1984 a senior British sales team arrived in Delhi to attempt to sign a Memorandum of Understanding (MoU) and build upon previous successes with Westland, Rolls Royce and British Aerospace. However, the visit was not well timed, coming as it did during a period when foreign exchange reserves were low and the emerging consensus within the Government appeared to be to sacrifice diversification, albeit temporarily[28]. During the same period, however, a draft agreement between Italy and India was announced to open the way for collaboration in defence electronics[29]. A five year MoU was signed

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25 For many years the Soviet Union has attempted to persuade India to permit it basing rights at Vishakapatnam, the naval base on the East coast of India which the Soviet Union has twice assisted in modernising.

26 Aerospace Daily [24 October 1983], p.282.

27 Defense Week [February 1984], p.6.

28 Washington Times [5 July 1984] and Ram [May 1984], pp.26-27.

29 Jane's Defence Weekly [20 October 1984).

in August covering the exchange of information with a stress upon Electronic Counter Measures[30]. Similar discussions were held with Spanish representatives in March 1985 with talks covering advanced jet trainers, field artillery and other armaments[31].

In October 1984 Indira Gandhi was assassinated by her Sikh bodyguards. Between October and the year end India remained suspended in political confusion until Mrs Gandhi's son, Rajiv, won the most astounding landslide victory in India's independent history. The new Prime Minister made little attempt to redirect Indian defence policy. However, one key difference soon became evident. Unlike his mother, Rajiv Gandhi is well disposed towards the United States and from the outset he appeared more willing to consider American defence imports. This benign approach towards the United States did in time lead to defence orders but had less of an effect than expected; by the time the deals were agreed, a new détente between the two superpowers was well underway.

It was, therefore, continuity rather than change which has characterised the defence policy of Rajiv Gandhi. One exception is his technical expertise based upon his training and experience as a pilot for Indian Airlines. This has given him the capability to discuss in much greater detail technical issues, an aspect of bargaining in which his mother took no interest[32]. Although the new Prime Minister may be willing to reduce the ties that bind India to the Soviet Union he has been unable to move too far, too quickly.

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30 International Defense Review, [August 1985], p.1346.

31 Taibo [9 March 1985]

32 Bobb [31 August, 1984], p.84.

First, India does not have the economic base to ignore completely Soviet offers of military equipment in favour of Western suppliers; the ability to diversify is constrained by limited foreign exchange reserves. Moreover, the new Prime Minister's insistence upon economic liberalism has cost the country dearly in foreign exchange. Second, there are delivery lead times to consider. Much of the Soviet defence equipment which has arrived in India since Rajiv was elected was ordered during his mother's term of office and before.

Third, the inherent differences between Soviet and Western technology make such a radical shift very difficult to execute in practice, although at great cost and military aid Egypt has made just such a transition on two occasions in the past. With tanks, for example, the Soviets rely heavily upon quantitative rather than qualitative strength to gain the upper hand through rapid attrition. Such tactics have evolved from the technological limitations which exist in the Soviet defence industry and its inability to match the pace of technical change which obtains in the West. However, in a planned economy long production runs are less difficult, so Soviet military planners are bound to exploit this comparative advantage. The transfer of Soviet military technology to Third World countries will undoubtedly carry with it a degree of doctrinal baggage which will be influential in how the weapons systems are assimilated by the recipient armed forces. The use of relatively low technology compensated for by weight of numbers will require a specific set of tactical considerations distinct from what would be required from technology which is more capable, more costly and more difficult to repair. Other factors are also relevant. Current Soviet doctrine has been reluctant to reduce the primacy of the human factor in

aviation, whereas the opposite situation is apparent in the West. Air-land battle concepts have not been given the salience that they have in the West. Uncompromising defence of the homeland is fundamental to Soviet strategic thinking. Finally, Soviet command and control is a great deal more centralised than that of NATO.[33]

At the time of writing Rajiv's first term in office is drawing to a close; elections must be held by December 1989 at the latest. However, after four years in power it is barely possible to say what the new Prime Minister believes in, or understands, in relation to India's global or regional role. Certainly, he still lacks the political depth of both his mother and his grandfather. Although his initial impact upon the world stage was highly favourable, his popularity was short-lived and he is now considered to be of little significance in the NAM or any other form of Third World politics.

On specific questions of defence policy and posture rather than more general questions of foreign policy, Rajiv has changed little. On the foreign policy front. his pathbreaking visit to China, which took place in mid-December 1988, the Indian intervention in Sri Lanka (which was mooted in New Delhi as early as mid-1984), the brief intervention in the Maldives and a warming of relations between India and the US have been the dominant events. With Pakistan, Rajiv has maintained the mix of 'no war, no peace either', although this may change following the election of Benazir Bhutto, and he has on several occasions acquiesced to the armed forces flexing their muscle on both the Chinese and Pakistan borders[34]. Probably, he has no

33 Brown [1986], pp.41-47.

34 The most significant display came during the Operation Brasstacks military exercise which involved the Indian Army in a

specific antipathy to the course charted by his mother which appears to be popular within Congress(I), with the public at large and, in particular, with the armed forces. The only perceivable policy adjustment appears to be the desire to see the indigenous defence base develop at a much more rapid rate and overcome the inertia which set in over the 1970s. Finally, although Rajiv himself and some of his key advisers, such as Arun Singh, have held the defence portfolio, the emphasis has been on the internal security problem. In particular, there is concern that Pakistan's support for the Sikh terrorists might both strengthen their resolve and options and, furthermore, that the critical logistical importance of Pakistan as a sanctuary might become a major source of bilateral tension.

6.3 The Indian Army

Over the past decade, the Indian Army has once again fared much less well than the other two services, for two reasons. First, with manpower levels standing at 1.1 million, a very large proportion of the Army's allocations are absorbed by pay and stores and this has been the case since 1963-64[35]. During the late-1970s and early 1980s, the Army received a decreasing proportion of the overall defence budget. From receiving 74% in 1970-71, by 1980-81 the figure had dropped to 66%, (excluding pensions). This trend was also

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rapid movement towards the Pakistan border. In addition to souring relations for some months, the exercise prompted a full scale mobilisation of the Pakistan armed forces and almost the outbreak of war.

35 Pensions are not included in defence expenditure figures.

reflected in capital allocations which declined from 51% to 36% during the same period.

Nevertheless, the Army did receive a significant share of the modernisation package. However, unlike the other two services, much of the planned procurement was drawn primarily from Soviet or indigenous resources, which increased considerably its inventory but with a minimal drain upon foreign exchange.

The agreement signed with the Soviet Union in May 1980 gave the Army a significant increase in firepower. The long standing desire to replace completely the aging Centurions and supersede the obsolete and troublesome Vijayanta main battle tank was at last granted through the procurement of 800 T-72 tanks, two hundred to be supplied directly, the rest built under licence. However, the Vijayanta was not in fact withdrawn and, by the mid-1980s, 1,250 units were still in service[36]. Instead, the Army examined various proposals for retrofitting the Vijayanta including the installation of a new and more powerful engine, laser ranging and night-visual systems[37]. Moreover, by 1986 only 350 T-72s had been received[38].

In addition, the Army was scheduled to receive anti-tank and surface-to-surface missiles. Also mooted at a later point was the potential acquisition of the T-80 main battle tank which had yet to come off

36 International Institute for Strategic Studies [1986], p.154. Also, the Government cancelled the proposed sale of Centurion tanks in December 1980 and decided instead to utilise 'the tanks and their firepower in a suitable way', Indian Express [10 December 1980].

37 Asian Defence Journal [November 1981], p.36.

38 International Institute for Strategic Studies [1986], p.154.

the production line in the Soviet Union[39]. The offer finally came during the Ustinov visit in March 1982 although the primary purpose of the visit was to dissuade India from purchasing the Mirage 2000 by offering the MiG-27 fighter bomber[40]. When Venkataraman visited Moscow in June 1983, Army equipment was scarcely on the agenda, except for the request for an updated technology transfer package for the T-72 to include the new laser range finder[41]. In early-1984 New Delhi placed a significant order with the Soviet Union which reconfirmed that the Indian Army was in line for the more advanced T-72M and the T-80. In addition it was also to receive more BMP 1 armoured personnel carriers, the BMP 2 airportable version, the SAM 8 missile, a mobile field surface-to-air system, the SAM 5 long-range surface-to-air missile and, in addition, long-range, dual-capable surface-to-surface missiles.[42] Several of these acquisitions related to the decision in mid-1981 to modernise the air defence regiments under Army command[43].

Other imports for the Army arrived in piecemeal fashion during the mid-1980s. In mid-1985 the Government placed an order with the Dutch Government for 250 Hollandse Signaal Flycatcher radar weapon systems for its air defence regiments and intended for use in tandem with the Contraves Superfeldermaus weapon control systems[44]. One year later 120 Simfire Mk II Extended Range-Improved Tactical and Gunnery

39 Ram [October 1981], p.27.

40 Congressional Research Service [1985], p.132.

41 Bobb [15 August 1983], p.41.

42 Furdson [19 January 1984].

43 Times of India [13 August 1981].

44 The Statesman [1 January 1986].

Simulators were ordered from Britain for the Army's main battle tank fleet.

If the Indian Government appeared to err on the side of economy when it came to the modernisation programme for the Army, it was undoubtedly due to the impending decision to procure a substantial number of 155mm artillery systems following Pakistan's decision to buy 75 155mm M198 towed howitzers from the US. Although Pakistan's howitzers arrived under the military and economic aid agreement, India had been investigating the procurement of a 155mm system since 1977[45]. The Army requirement was for a medium gun capable of firing heavy artillery at a long range. The key targets for the artillery would be enemy armour, troop carriers, roads and bridges and with a range of c.30 km which would mean that it could only be attacked by air. By early-1981, the choice had been narrowed down to four options with Sweden, Austria, France and a British-German-Italian consortium as the contenders for the contract. In March 1986 the contract for 1,500 artillery pieces costing $3.5 billion (although some sources put the cost much lower at $1.14 billion) was awarded to Sweden, which came as a great surprise to many.

Soon after, the deal erupted into a major scandal involving the payment of commissions to middlemen and unnamed Congress(I) party heads. Even the Prime Minister, who also held the defence portfolio at the time, was accused of being involved, partly through his dealings with Olaf Palmé who visited New Delhi some two months before the deal was signed. Also, it has been alleged that the brother of Amitabh Bachchan, an MP-actor associate of the Prime Minister's,

45 Bobb (et al) [15 May 1987], p.18.

handled much of the money in Switzerland. Although Rajiv was officially cleared of receiving any part of the £30 million commission and wind-up fees, the event rocked the Government and led to the resignation of V.P. Singh, who has since emerged as a formidable voice in opposition. However, at no point, it seems, did the scandal shake public confidence in the way defence decisions are taken - it was primarily a political issue which did not involve questions of national security.

To add to the massive deal with Boförs, in late-1986 India considered the purchase of a self-propelled 155mm howitzer from Britain with the intention of utilising the Vijayanta chassis[46]. Only weeks later Royal Ordnance, the British government-owned munitions and arms factory won an order from India for 14 Combat Engineering Tractors in a deal worth £40 million[47].

In 1987 the Army came under criticism for its prevarication over which rifle to choose as a replacement for the indigenous Ishapore. All the choices are for an imported weapon, although a licence for production will certainly form a part of any deal which emerges.

Surprisingly, a report in early 1988 indicated that a new modernisation phase for the Army was underway. Plans were reported to include more and better main battle tanks, an infrastructure for overhauling T-72 and BMP-1 units and several areas of indigenous production[48].

46 Jane's Defence Weekly [27 December 1986], p.1472.

47 Financial Times [22 January 1987].

48 Jane's Defence Weekly [5 March 1988], p.390.

In addition to increased procurement the Army had another bureaucratic battle to wage through the 1980s. Since independence the status and role of the Army, in absolute terms and in relation to both the civilian bureaucracy and the other services, had gradually declined over the years. Yet at the same time, the role of the Army in the sensitive area of internal security gradually increased up until the point when by 1980 the Army had been used on 375 occasions to assist the police in maintaining law and order over a four year period[49]. Certainly, much of this was related to relatively minor disturbances but Mrs Gandhi's decision in June 1984 to sack the Holy Temple in Amritsar (Operation Bluestar) was a particularly difficult task for the Army to undertake. It lowered morale amongst the ranks and led to desertions and alienation amongst Sikh troops.

As the Army became increasingly indispensable to the Centre's drive to maintain law and order and reverse the centrifugal forces within the country which stretched from Tamil Nadu in the South East of the country to the Punjab in the North West, its leadership began to request compensation in various forms. First, the Army successfully pushed for a degree of reorganisation to reflect its declining relative dependence upon basic infantry strength. Between 1979 and 1983 the overall strength of the Army increased, over and beyond armament procurement. The total number of Independent Armoured Brigades was raised to seven from five and a Mechanised Division was created[50]. However, the continuing debate over whether or not to

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49 Jacobs [September, 1985], p.4.

50 Jacobs [1985], p.6.

create a post of Chief of Defence Staff has not been resolved in the Army's favour (see Chapter Eight).

Second, during the mid-1980s, a separate debate emerged over the position and status of the Indian Army in society. By March 1986 the Prime Minister had ordered an enquiry into the continued degradation of defence service officers in the warrant of precedence (see Chapter Three). Equally, a related issue emerged in the form of technical competence on the part of the Army. Traditionally, the Indian Army is notable for its conservatism but the Chief of Army Staff over this period, General K. Sundarji, attempted to do to the Army what Rajiv Gandhi wished to do with the rest of Indian society in relation to science and technology. In a letter to the officer corps, Sundarji made his preferences very clear,

> "Many of us have not kept ourselves professionally uptodate, doctrinally or technologically: we have felt that we have 'got it made', and rested on our oars: we do not read enough: we do not think enough, and some of course, have been promoted well beyond their capability. In the practice of our profession, we have not insisted on standards being maintained and turn our eyes away from irregularities..."[51]

Apart from the attempt to capitalise upon the compromises engendered by a greater involvement in internal security issues and thereby increase size and status, the Army were also aware of an burgeoning and serious skills shortage. All in all the Army was apparently becoming an unattractive career. Of the troops selected for training some 37.5% deserted. At the other end of the spectrum the Indian Military Academy, the main feeder institution for the officer cadres, have become desperately short of worthwhile recruits, particularly in

51 The Indian Express [3 March 1986].

engineering. A shortfall of 18% in 1976-77 rose to 75% in 1982-83. In the same year the technical course on offer at the Officers' Training School was discontinued due to a lack of adequate response. In order to redress this marked decline the Army requested lump sum grants to young soldiers and special allowances for high risk jobs. Other demands included more respect in civilian circles for Army personnel.[52]

Third, the Army sought expansion through the creation of an Army Aviation Corps (AAC). Such an organisation was created in mid-1986 with the intention of providing the Army with at least 200 helicopters, including gunships. Eventually, however, it turned out to be a hollow victory when allocations for the AAC dwindled to virtually nothing during the late-1980s. In the 1988-89 defence budget the army aviation wing received only Rs.0.2 million ($154,000)[53].

6.4 The Indian Navy

During the 1980s, the longstanding commitment to an ambitious naval presence in the region finally came to fruition. A Government report in 1978 signaled the onset of a twenty year naval development programme designed to give the country an indubitable 'blue water' naval capability[54]. In keeping with Indira Gandhi's view of the preferred defence policy for India, the naval modernisation programme

52 Gupta [31 January 1985], pp.94-99.

53 MILAVNEWS [August 1988], p.17.

54 Tellis [1987b], p.193.

was unequivocally based upon power projection. The proposed role for the Navy went beyond sea denial and was intended to include both the complete control of the sea lines of communication (SLOCs) and the ability to come to the aid of small developing countries within the region[55]. The primary naval missions during this period were fourfold:

1) Protection of India's water frontiers and sea approaches to the country.

2) Protection of India's natural resources in the waters contiguous to the Arabian Sea and Bay of Bengal.

3) Protection of the country's foreign marine traffic.

4) Utilization of the Navy to promote Indian political and national goals throughout the Indian Ocean and the Middle East.

As with other areas of defence procurement, many of the decisions regarding expansion were in fact taken by the Janata Government and implemented during the 1980s with several additional acquisitions, and were continued by Mrs Gandhi because they suited so well the search for regional hegemony. Also, the process of decision making took a considerable amount of time, particularly with regard to the evaluation of competing systems available from West European suppliers.

Another striking aspect of the naval modernisation programme was the determination to move away from the Soviet Union as a sole source of supply. During the 1970s the state of the economy and the willingness on the part of the Soviet Union to supply naval equipment gave the Indian Government no choice but to accept the offers. In

55 Jacobs [1983], p.886.

the 1980s India found itself able to afford a more independent naval build-up which could permit the Navy to develop independent missions without external constraint.

One of the first agreements in this direction was the decision to supersede India's eight aging Soviet Foxtrot's with SSK-1500 Type-209 hunter-killer submarines of West German design. The deal took over two years to confirm on account of stiff competition from the Kockums shipyard in Sweden. In addition to the two craft from West Germany, it was agreed that India would produce at least two more units indigenously in a deal costing an initial $500 million. In some quarters the agreement was heavily criticised on account of the poor performance of the Type-209 and its aging design[56]. The deal was cancelled in 1988 when India alleged that the West German company HDW had sold similar design plans to South Africa but not before at least one of the boats had been received[57].

The West German submarine deal was followed by a procurement rush throughout the mid-1980s from both the Soviet Union and West European exporters. Without doubt, the key beneficiary during this period was the fleet air arm following the modernisation of the Vikrant during the early-1980s to include a ski ramp to accommodate the Harrier V/STOL and other needs for the future. Initial offers were received from France, Spain and Britain[58]. In addition, the Government began to approach foreign firms to buy the plans for the production of a

56 Karnad [21 November 1981].

57 Jane's Defence Weekly [14 March 1987].

58 Mukherjee [1985], p.14.

second aircraft carrier[59]. However, exactly where in India such an enormous vessel could be produced was not clear at that time.

India's first Sea Harrier FRS Mk.51 was handed over to the Indian Navy in January 1983, which was followed by another five front line aircraft and two trainers. The order was expected to be followed by a request for more Harriers as six aircraft were obviously an inadequate complement for the Vikrant[60]. The aircraft were armed with Matra 550 Magic dogfight missiles and, in the wake of the Falklands War, the Navy seemed keen to acquire the Exocet for the Harrier's anti-ship role. In the event, however, India ordered the more sophisticated Sea Eagle anti-ship missile from Britain, which the Royal Navy was acquiring to replace their Exocet missiles[61]. The Sea Eagle was also intended to arm the 12 Sea King helicopters ordered from Britain following the rejection of an offer by France to supply a package involving the Super Puma and the Exocet, primarily for the Godevari frigates which carry two helicopters[62]. The Sea King order was swiftly followed by a parallel order to MEL (UK) for a £9 million Super Searcher airborne command and control system. French and British companies also competed for the sale of the anti-ship missile to equip the 24 Dornier Do 228 aircraft purchased in 1985 and designed to enter coastal patrol duties in 1988, an order worth £60 million[63]. The Sea Skua air-to-surface missile was the

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59 Dua [7 May 1981].

60 Daily Telegraph [17 December 1983].

61 British Aerospace Dynamics Group News Release [20 July, 1983].

62 MILAVNEWS [August 1983], p.17.

63 Chuter [21 September 1985], p.601.

eventual choice, in part because of their interface with the Super Searcher[64].

Interest in a second aircraft carrier took several years to bring to fruition. However, on 24 April 1986 India announced plans to purchase the British carrier HMS Hermes (renamed the Viraat) for a sum of $94 million including drydocking, refit, spares and support. The ship had been laid up for two years after serving as the flagship to the Royal Navy task force during the Falklands/Malvinas conflict. As with the Vikrant, Hermes was laid down after the Second World War and would have been scrapped by the UK if India had not bought the carrier[65]. Even with refitting the vessel had a limited life in 1987. Inevitably, the agreement to purchase another carrier led to increased orders for the Harrier and other equipment relevant to the deployment and protection of an extra carrier. Shortly before the deal was announced, reliable reports suggested that the Memorandum of Understanding signed with the British had been revised to accommodate more Harriers and Sea Kings to equip the new carrier[66]. By mid-1985 further orders for the Sea Harrier looked likely, to bring the number of Indian purchases to 48[67]. In addition, the Chief of Naval Staff, Admiral R.H. Tahiliani, immediately indicated that a third and possibly fourth aircraft carrier to replace the aging Vikrant would be required but that in future the vessels would be produced indigenously[68].

64 Jane's Defence Weekly [19 July 1986].

65 Navy News & Undersea Technology [9 May 1986]. See also, Jane's Defence Weekly [22 June 1985], p.1197.

66 Jane's Defence Weekly [21 September 1985], p.605.

67 MILAVNEWS [July 1985], p.5.

68 International Defence Review, [March 1986], p.369.

Increasing interest in the naval equipment on offer from the West brought several offers from the Soviet Union. In 1982 the Soviet and Indian navies underwent joint training exercises[69]. Rather than a sign of success for Soviet attempts towards a collective security system in Asia, the exercises were probably designed to impress upon the Indian Navy the capabilities of ships such as the Kresta II class anti-submarine warfare cruisers and the aircraft carrier Minsk which visited Bombay in 1982, together with the cruiser Tashkent[70]. Nevertheless, the Soviets were disappointed. In particular, it was reported that the Navy was largely disatisfied with Soviet naval equipment. The only Indian ship sunk in the 1971 war with Pakistan was a Soviet supplied destroyer. It was alleged that Soviet submarines had to be serviced too frequently and that the overhaul period took too long. Also, the Natya class vessels had to be modified for stability when major defects became apparent on the delivery run from Vladivostok[71]. However, as the Kremlin saw its influence decline its offers became more attractive and included nuclear powered attack submarines and the Kilo type submarines which were under development when India ordered the Type-209 submarines from West Germany[72]. These offers met with some success. In 1986 the decision was taken to replace the Petya type ASW corvettes with Nanuchkas or newer types[73]. At the same time it was announced that

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69 Jacobs [August 1983], p.886.

70 Jacobs [August 1983], p.888.

71 Tandon [5 March 1988].

72 Pacific Defence Reporter 1985 Annual Reference Addition [December 1984/January 1985], p.208.

73 Jane's Defence Weekly [20 September 1986], p.622.

the fourth of the Rajput class of guided missile destroyers (Soviet-built Kashin) had joined the Indian Navy[74]. This was swiftly followed by the first of six Kilo class submarines to augment the acquisition of Type-209s which together replaced the Foxtrots[75]. All in all the naval equipment procured from the Soviet Union during this period amounted to $750 million and formed a part of the $1.6 billion deal[76].

The major agreement of the 1980s came in late-1987 when India announced that it would shortly receive a nuclear powered submarine from the Soviet Union. Early the next year the boat was identified as a Charlie I type cruise missile carrier equipped with eight launcher tubes and missiles with a range of 64 km[77]. This was the first time that a nuclear powered submarine had sailed under the flag of a non-builder and caused surprise and confusion within the nuclear non-proliferation regime, it was unclear whether or not the transfer contradicted the terms of the Non-Proliferation Treaty. Whilst the transfer was first mooted as early as 1984, nevertheless, it was still a great surprise to the West[78]. This deal may yet be followed by the transfer of another four or five similar systems, a part of a package involving expenditure in the region of Rs.3,000 crores[79]. Also, it was anticipated that by late-1988 the Very Low Frequency communication station started in 1984 (the same date that

74 Jane's Defence Weekly [20 September 1986], p.618.

75 Jane's Defence Weekly [27 September 1986], p.670.

76 Jane's Defence Weekly [29 November 1986], p.1260.

77 Jane's Defence Weekly [6 February 1988], p.199.

78 Jane's Defence Weekly [23 January 1988], p.116.

79 India Today [31 December 1987], p.72.

negotiations opened with the Soviet Union over the nuclear powered submarine) would become operational thereby giving India a naval capability unmatched by any other Indian Ocean littoral state.

Coupled with an ambitious naval shipbuilding programme, the modernisation programme of the 1980s has given the Indian Navy a substantial increase in its ability to patrol the reaches of the Indian Ocean. Although the Navy has yet to use its guns in anger since the 1971 war, the growing capability of the Indian Navy is slowly becoming evident. In 1987 Indian frigates were seen off the coast of Mozambique, although the purpose of the visit was unclear. In 1988 the Government was able to intervene in the Maldives to prevent a successful coup, an act condoned by the Commonwealth but greatly resented by many of the smaller states in South Asia, particularly Sri Lanka. Further afield, there were unsubstantiated reports during the same year that India was considering intervention in Fiji to protect the lives and property of dispossessed Indians. Quite how much further the Government is prepared to go in displaying its now formidable naval force is not clear. Nor is it apparent how free the Government is to operate the nuclear submarines without restrictions, particularly with regard to deployment and engagement.

6.5 The Indian Air Force

1980 was a year of confusion for both the Indian Government and the IAF. Following widespread allegations over corrupt practices surrounding the Jaguar deal, which was eventually signed during the Janata era, the new Government prevaricated over how to proceed. A

key difficulty stemmed from the fact that some of the most vociferous critics of the deal were by 1980 in decision taking positions. Mrs Gandhi had criticised the deal on the basis of cost-effectiveness, alleging that the cost of producing the Jaguar domestically was twice that of buying it direct from Britain[80]. Nevertheless, in March 1980 Mrs Gandhi took the decision to proceed with the £1 billion deal with Britain[81]. Shortly afterwards she rejected an official enquiry which came as a surprise as one of her key political opponents, Jagjivan Ram, held the defence portfolio during the negotiations and the calls for a probe were widespread[82].

The major deal agreed with the Soviet Union in mid-1980 led the Government to renegotiate the terms of the Jaguar deal. On offer from the Soviet Union was the MiG-23 at one third the cost of the Jaguar and with all the favourable repayment conditions. Instead of purchasing 40 Jaguar units outright before moving on to the licensed production of 110 units, the Government decided to double the quantity of units bought 'off the shelf' and cancel the licensed production agreement[83]. So confident was the British Government that the order would be taken up in full, or so desperate was the same Government to see it go through, that cancellation penalties were not included in the contract[84]. Nor did the British Government expect its Indian counterpart to waste £30-50 million of industrial

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80 Anthony [1988], p.229.

81 Sharma [14 March 1980].

82 Flight International [5 April 1980], p.1048.

83 Sunday Times [22 June 1980].

84 Reports as to the cancellation fee differ, the Far Eastern Economic Review [1 August 1980] reported high cancellation fees as a reason for continuation.

investment in the form of tooling up at HAL which would potentially go to waste with the cancellation.[85] However, even as late as mid-1982, the situation was still unclear when Defence Minister R. Venkataraman remarked that 'the manufacture of more Jaguar aircraft had not been ruled out'[86].

Equally confusing was the explanation coming from the Government that the Jaguar order had been scaled down in favour of the MiG-23 when in fact the systems were not comparable. The former has a dedicated long range strike role, whereas the MiG-23 is designed for ground support within a 150 km radius. Moreover, the latter is single-engined whereas the IAF prefer twin-engined aircraft such as the Jaguar.

Part of the confusion was explained by the mid-year news that France had emerged as a prospective supplier of front-line aircraft in the form of the Mirage 2000, an offer said to be 'irresistible' for India,

> "India has been promised 'exclusive' production rights for the area- including exports to the Gulf and South-east Asia, if any country there can eventually afford the plane - if India signs a sizable contract, say 150 planes to be built in the mid-1980s. However, France has let it be known that a refusal could result in the Mirage F 2000 going to Pakistan and that France is considering a Pakistani request for 35 of these planes.
>
> Thus the French are trying to box in India with its own security considerations - principally the denial of this ultra-advanced technology aircraft to Pakistan."[87]

85 The Guardian [12 August 1980].

86 MILAVNEWS [May 1982], p.7.

87 Mascarenhas [20 July 1980].

In addition Dassault offered India a place at the drawing board on its new development, the Mirage 4000, an extremely advanced aircraft intended to compete with the Grumman F-14 Tomcat and the McDonnell Douglas F-18[88]. The offer came at a time when French defence exports were facing serious problems, which explains why Dassault should in effect bid against itself as Dassault had an ongoing interest in the Jaguar deal on account of its recent takeover of Brueget, British Aerospace's collaborator on the Jaguar. The Mirage 2000 had largely failed to find a niche in the export market due to the success of rival systems such as the F-16. At a later date, whilst the Indian Government equivocated over the option to produce the Mirage under licence, the French offered to tie the deal to the development of the indigenous Light Combat Aircraft through 'unrestricted access' to the technology embodied in the Mirage 2000[89].

The French negotiating team arrived in New Delhi in late-1981 for final negotiations over the Mirage 2000. Such was the concern in the Kremlin that a firm toe-hold in the Indian market was on the point of being lost that an offer of the MiG-25 air superiority fighter as a counter to the F-16 coincided with the French visit. In addition, it also became known that India had accepted an earlier Soviet offer to procure and produce under licence the MiG-27 Flogger J tactical strike fighter rather than the MiG-23 BN[90]. Also on offer from the Soviet Union during this period were AN-32 transport planes and Mi-24 helicopter gunships[91].

88 MacLachlan [26 May 1981], p.1.

89 MILAVNEWS [December 1983], p.16.

90 MILAVNEWS [May 1982], p.8.

91 Asian Defence Journal [November 1981], pp.36, 38.

The Mirage 2000 deal was finally signed in February 1982 after negotiations slowed down following Indian demands for a more attractive technology transfer and follow-on package plus a more powerful engine, the Snecma M-53p-2 capable of an increased combat range, and reduced interest rates. The first stage of the deal involved the outright purchase of 40 units, costing $1.3 billion at $32 million per copy, with an option to proceed on to a second stage involving the licensed production of another 110 units[92].

Amidst the tension surrounding the negotiations with France, a British defence export team arrived in New Delhi with the intention of interesting the Indian Government in the air defence variant (ADV) of the Tornado Multi-Role Combat Aircraft (MRCA). The pitch centred upon the ADV but would have been extended to the Interdictor Strike (IDS) had the Government shown any interest. In the event, the team returned to the UK empty-handed and reports at the time suggested that the MRCA was too expensive[93]. However, a key argument put forward by the sales team was that the MRCA would in fact be less expensive than the Mirage[94]. Also, it became clear around the same time that India was uninterested in submissions by Northrop for co-production of the F-20A by India[95]. Even if the Indian Government had shown more than a perfunctory interest, any deal involving the F-20 would have required Foreign Military Sales funding which would

92 Malhotra [13 February 1982].

93 Smith C. and George [2 March 1985], pp.365-370.

94 Asian Defence Journal [November 1981], p.38.

95 MILAVNEWS [February 1983], p.17.

have been unlikely given Congressional concern over policies which had in the past led to the arming of both India and Pakistan.

However, the MRCA failure was partially offset by the Government's decision to revive the licensed production section of the Jaguar contract. Following speculation that all licensed production had been cancelled, it was decided to assemble 45 completely knocked down (CKD) units and assemble a third batch of 31 Jaguars with an estimated value to the UK of $290 million[96].

With few exceptions, little of any great significance occurred for the IAF throughout the mid-1980s . Most of the key modernisation agreements had been settled, with or without an indigenous production element, and it only remained for the IAF to assimilate the new weapons systems in a reliable fashion and redress one of the worst accident rates in the world. The accident rate for the Chetak helicopter, produced under licence from France, was ten times the world average in 1985. Moreover, between 1977 and 1983 an air safety committee investigated 262 major and minor accidents including 31 write-offs and the causes were attributed to pilot error, recklessness and a deficiency in trained technicians.[97] Nor were these expressions of concern allayed when, in mid-1986, three Indian fighter aircraft crashed within 24 hours - two of the fighters were MiG-21s, the third was not identified[98].

96 MILAVNEWS [March 1983], p.15.

97 MILAVNEWS [October 1985], p.18.

98 MILAVNEWS [August 1986], p.14.

Reports that India had shown interest in the Nimrod AEW.3 (advanced early warning) system in 1982, and again in 1986 following its rejection by the British Government, came to nothing, possibly on account of the sensitive equipment embodied in the system. Nor did plans to use an appropriate version of the mission's avionics in a less expensive airframe, such as the HS 748, which HAL was already producing.[99]

In late-1983 speculation mounted as to the possible agreement between the Soviet Union and India over the supply of the new MiG-29 Fulcrum, complete with manufacturing rights[100]. The deal was finally announced in August 1984 and came as a great surprise to the West. The MiG-29, a major top-line, state-of-the-art fighter was only just entering service with the Soviet Air Force and had yet to be issued to Warsaw Pact allies. Moreover, the Soviets are habitually cautious about sensitive technology transfer to countries with links to the West.

Whilst the MiG-29 caused great interest in the West for primarily political reasons, indicating as it did the extent to which the Soviet Union was attempting to head off India's successful diversification programme, it was not until mid-1988 that the full significance of the deal became apparent. In the very much more relaxed atmosphere of the new détente the MiG-29 appeared at the Farnborough airshow and caused a sensation by outperforming the state-of-the-art Western systems particularly with regard to

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99 MILAVNEWS [August 1982], p.13.

100 MILAVNEWS [November 1983], p.20.

manoeuverability[101]. Since the defection of a MiG-25 Foxbat pilot to Japan in September 1976, Western observers had been convinced of the retarded standards of Soviet aeronautic technology. Although the MiG-29 does not incorporate the type of 'fly-by-wire' technology which is now incorporated in state-of-the-art Western systems, this omission proved not to be detrimental to either the horizontal or vertical performance modes of the aircraft. Thus, India's acquisition of 40/45 MiG-29s is now seen as a much more significant event than it was in 1984. However, the Soviet Union has withheld from the supply and co-production contract the sophisticated look down/shoot down radar and the new AA-X-10 medium range air-to-air missiles which are expected to comprise the Fulcrum's primary armament when in Soviet Air Force service. Instead, the more dated avionics installed in the MiG-23 will be used, together with the less sophisticated air-to-air missiles which arm both the MiG-23s and the MiG-21s[102].

With the exception of reports that the IAF would procure the Soviet IL-76 Mainstays to satisfy the Advanced Early Warning (AEW) requirement and the Yak-28 Brewer E light bombers for Electronic Counter Measure (ECM) duties, little else was reported for the IAF[103]. Instead, attention focused upon the needs of the Fleet Air Arm, particularly following the appointment of Admiral Tahiliani as chief of naval staff in late-1984, himself an ex-naval aviator. Also, considerable attention and resources were directed towards

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101 See, for example, the several articles on the event in Aviation Week & Space Technology [12 September 1988].

102 MILAVNEWS [November 1984], p.14.

103 MILAVNEWS [April 1984], p 5.

India's major indigenous project of the decade, the Light Combat Aircraft (LCA).

6.6 Procurement in Search of a Policy?

Over the 1980s India has engaged in the most significant conventional defence build-up in its history and, within the Third World, it has rivalled only the profligate expansion programmes of the OPEC Gulf states during the late-1970s. In 1987, for example, approximately 20% of all the arms exported to Third World countries were sold to India[104]. Tinged with several hints of corruption and necessitating heady rises in defence expenditures to service increasing procurement debts, the modernisation programme proceeded apace without policy reviews since 1981 and, on occasion, it seemed, without a strong direction.

Over a five year period, 1982-1987, Indian defence expenditure rose by 50%. The 1987-88 defence budget alone increased by 23% from the previous year which had in turn increased by an unplanned 16%. However, $190 million was diverted from the defence budget in late-1987 to alleviate the chronic drought conditions experienced in many parts of the country, especially Rajasthan. With the exception of the period following the 1962 war, defence expenditure averaged approximately 3% of GNP over the 1960s and 1970s. It is now much more and closer to 5.5%[105].

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104 SIPRI Arms Trade Registers and Data Bank.

105 Gupta and Thakurta [February, 1989], p.43.

Clearly, much of India's defence equipment was in urgent need of modernisation by the 1970s. The Soviet Union provided the only source of military hardware during that decade due to chronic economic problems and foreign exchange shortages. When the Janata Government came to power it created the opportunity not only to preside over a significant modernisation programme but also to reverse the degree of dependency upon the Soviet Union. The re-election of Mrs Gandhi saw a continuation of the modernisation programme but she exploited the diversification policy to extract the maximum financial, technological and political advantage from a buyers' market on the one hand and a concerned Soviet Union on the other.

Politically, Mrs Gandhi and, later, Rajiv handled the process well, witness the quality of front line equipment currently deployed by the Indian armed forces. However, it is by no means clear that India required the scale of modernisation for defence alone. Nor is it apparent that the choice of technology was particularly appropriate for anything beyond symbolism.

In the early 1980s India perceived three areas of threat to its security - Pakistan, China and a more nebulous threat from the Indian Ocean. In addition there were perceived problems stemming from the Soviet invasion of Afghanistan, the renewed and much resuscitated relationship between Pakistan and the US and, further afield, disconcerting developments in the Persian Gulf. However, whilst the net effect may have been to alter India's security environment, direct threats to the country's territorial integrity or off-shore resources are difficult to identify. Whilst the nature of the geo-

political environment may have changed, certain basic principles, such as those identified by Nehru, did not - India's size and geo-political significance in a bi-polar world provided its own form of security.

Even with the US military and economic aid package, which over the decade amounted to less than India currently spends on defence each year, Pakistan posed little threat to India. Whilst there always existed the possibility of a lightning strike to increase territorial gains in Azad Kashmir, unprovoked action would certainly have jeopardised bilateral military and economic aid from the US and multilateral aid from elsewhere - Pakistan is unequivocally dependent upon the US. So too would it have likely tipped the balance in favour of those Congressmen who wished to penalise Pakistan for its nuclear weapon programme. With the Punjab well fortified for defence on both sides, Pakistan's only outlet for aggression lay in the Rajasthan desert - an unlikely option given India's overwhelming 3:1 conventional superiority.

Nor was there any reason to suspect that China posed the type of threat which existed two decades earlier. Apart from a quantum increase in planning and vigilance to absorb another attack by China, India could rely upon the post-Mao internal upheavals and the massive four modernisations programme occupying all Chinese efforts into the foreseeable future. Although Sino-Indian relations did dip markedly in 1986 leading to fractious relations and border incidents, the tension was shortlived. Indeed, it is remarkable how, over the 1970s and 1980s, the threat from China became an increasingly diplomatic rather than a military problem for New Delhi to solve. Rajiv's

successful visit to China in 1988 and successive rounds of talks over border issues reflect well the propensity on both sides to seek diplomatic solutions and avoid at all costs another conflict.

Even more tenuous were the perceived threats from the Indian Ocean. Whilst there did exist a major superpower build-up in the region following the departure of the British, the emphasis was upon strategic factors which turned largely on the Gulf War and the rise of Muslim fundamentalism. Pakistan's role in this process was of concern to India but the idea of a threat to off-shore oil resources or outright invasion or blockade from either the Rapid Deployment Force or the US Seventh Fleet was inconceivable. Indeed, the significance of Indian policy in this theatre lies in its vagueness. At no point was the generalised threat perception followed through to its logical and specific conclusion.

Equally significant was the cavalier approach taken by India to defence posture overall. During a period when large capital ships were increasingly seen as vulnerable and expensive, the Government opted for a second aircraft carrier and announced plans to procure at least a third from indigenous sources. In the aftermath of the Falklands/Malvinas conflict, the key lessons gleaned by Indian strategic planners did not centre upon the fortuitous circumstances under which the British task force managed to acquit itself, or the limitations and vulnerability revealed by large ships which did not benefit from, at the very least, anti-missile systems. In fact, defence opinion shapers were becoming seriously disenchanted with large ships of the line due to their high-value status as targets and their increasing vulnerability in the face of missile improvements.

Instead, Indian policy makers were alerted to the importance of protecting extended coastlines which in turn justified the pursuit of naval power. At no point did the Indian Navy appear to define the operational context to justify not only two or more aircraft carriers but, in addition, the extremely expensive V/STOL airwing to accompany them. Having acquired for itself a high-value target, the Indian Navy has never indicated the specific military role that one or more aircraft carriers might play in the event of a war with Pakistan[106].

Whilst the Indian Air Force may have required updating and modernisation, particularly in the wake of the US-Pakistan aid agreement, the steps taken were open to question in many instances. The procurement of both the Jaguar and the Mirage 2000 were offered a post hoc justification by the Pakistani acquisition of the F-16. Whether or not the Jaguar could successfully fulfil its main mission and destroy the Pakistani F-16 squadrons while still on the ground would depend wholly upon the political circumstances leading up to the attack. Or, put another way, it would have to be a pre-emptive, surprise attack. Assuming that the F-16s took off successfully, the Mirage 2000 would be entrusted with the task of interception. However, given the numerous military and industrial targets throughout Northern and Central India within range for an F-16, the mix of strike routes would be too numerous for the Mirage to patrol[107]. Given the extremely high cost of the Mirage could the defence of India have been better served by a greater emphasis upon fixed air defences? Why did the Indian Government opt for a fighter

106 For an excellent critique of this aspect of Indian naval policy see Tellis [1987a].

107 Palit [30 October 1981].

that the French Air Force accepted with some reluctance, that the IAF was equally equivocal over, that had sold poorly on the international market and, furthermore, is a single-engined plane and thus extremely vulnerable in the environment of Northern India where it will most certainly be deployed?

Equally, no debate appears to have taken place about the overall trajectory of Indian defence. Whilst the political benefits of diversification are self-evident, how much are they counter-balanced by operational problems? For example, a squadron F-4 Phantoms require an inventory of 70,000 spare parts to be kept flying in wartime conditions[108]. Each successive generation of military technology justifies its existence in part by offering greater performance capability and, in general, is a more complex system than its predecessor which inevitably means that greater spare part inventories are required. Moreover, fault diagnosis and maintenance are also becoming much more complex requiring sophisticated computers to trace faults (and spare parts) and these too must be well maintained[109]. Recent procurement by the Indian Air Force has increased the range of equipment to include French, British, Soviet and West German systems which must require immense logistical planning to design a chain which can only ever be as strong as its weakest link.

Also, no apparent debate appears to have taken place to consider the implications of the performance of major weapons systems in recent conflicts, such as over the Falklands/Malvinas conflict and the range

108 Albrecht and Kaldor [1979], p.7.

109 See, for example, Spinney's description of the maintenance requirements for the F-16, Spinney [1985].

of engagements between Israel and its neighbours. Thus, during an era when the vulnerability of major weapons systems was increasing due to significant technical advances in missile technology, the Indian Government poured vast amounts of foreign exchange into the purchase of precisely the type of systems over which hung so many question marks.

Finally, and the subject of the next chapter, India's procurement policy through the 1980s can be questioned in relation to the time honoured policy of working towards self-sufficiency in the defence sector. For example, plans to produce under licence both the Jaguar and the Mirage were abandoned over time, leaving the aeronautics industry with nothing more than basic assembly of these systems from CKDs.

The speed and extravagance of the defence build-up, coupled with the continuing neglect of indigenisation, leads to the conclusion that political rather than military considerations were uppermost in the collective mind of the Political Affairs Committee of the Cabinet, the final arbiter on procurement decisions. Without doubt the imported systems offered the country a quantum increase in defence capability and added to security to some degree. However, the efficacy of the modernisation programme is so dubious as to suggest that the symbols of power rather than the principles of defence were responsible for defining what the country imported.

CHAPTER SEVEN

INDIGENOUS DEFENCE PRODUCTION: THE FAILURE OF POLICY IMPLEMENTATION

7.1 Indigenous Defence Production: The Commitment

The process of absorbing and assimilating technology is considered fundamental to the development process. Ordinarily, technology moves from North to South. Through a gamut of complicated mechanisms involving bilateral and multilateral agencies and institutions, the technologically advanced countries either sell, or transfer gratis, skills, production capability and capacity which in principle permit Third World countries to marry development needs to technology. Through these mechanisms Third World countries acquire the means of production on which to base agrarian and industrial development. In addition, the recipient countries may also enter into arrangements to import the managerial and administrative skills to organise and coordinate this process.

In the field of defence, the market is different in many ways, particularly with regard to restrictions on the nature and scale of technology which is transferred. However, the overall process is very much the same. If a country cannot produce for itself the systems and infrastructure considered essential for modern defence, it will be forced to look beyond its national boundaries for the

relevant technology and expertise. Over the past fifteen years, attempts to develop an indigenous defence capability have proceeded apace in several Third World countries. These efforts have led to a significant debate over whether or not there exist negative effects for the development process.

Developing countries become involved in defence production for different reasons. The motivations tend to stem from a combination of political factors, existing and potential technological capability in both civilian and defence areas and economic considerations. The configuration of indigenous defence industrial bases depends very much upon national strategies for industrialisation, which provides an initial explanation for the marked differences between, for example, the Brazilian and Indian defence industries. The former has been geared to export promotion, the latter towards import substitution. First, there are those countries which see a defence industrial base as an essential part of an overall expression of regional dominance - India in South Asia, Brazil in Latin America and, to a lesser extent, Egypt in the Middle East. Here, it is the threat of restricted action and, ultimately, embargo which provides the primary political motivation for defence production. Prestige and status are also important. Just as it is difficult for a country to be considered a great or super power without nuclear weapons, so countries which aspire to regional hegemony cannot convincingly do so without reducing their dependence upon external suppliers. The disparity between Japan's economic and political/military power is an instructive example.

Second, there are certain countries which are frequently or permanently ostracised by the international community, or parts of it, and as a consequence domestic production is often the only means of assuring a defence capability - there are limits to what can be predictably bought on the black market. Countries such as Israel and South Africa fit into this category, the latter in particular. Third, some countries see economic advantages to be gained from encouraging defence production, which may interface with the previous two motivations or, as in the case of Singapore, it may simply be a means of generating export revenue[1].

In the case of India there are strong economic and political reasons for the considerable all-round investment in defence production. Economically, India is weak in many ways. The rupee is a 'soft' currency and limited foreign exchange reserves have always been a constraint upon choice and source of technology, particularly in the 1970s. The purchase of both defence technology and finished systems places a strain upon foreign exchange reserves. There is, therefore, a high opportunity cost to be considered. However, against this it has been argued that India's resource base is basically underutilised and there is little or no inherent opportunity cost in defence production and expenditure[2].

Secondly, the combination of inflation (both within the defence industries and throughout the international economy) and the rate of technological change in the West has forced up the price of defence

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1 These arguments are more fully developed in Deger [1986], pp.152-155.

2 Benoit [1978].

systems making continued reliance upon exports a costly and undesirable condition. Primarily in terms of foreign exchange savings, partial or complete self-sufficiency would be economically advantageous[3].

Politically, the arguments in favour of India developing an indigenous defence base are as equally persuasive as the economic benefits. The need to become self-sufficient in defence production was first stated in 1926, well before independence, and was highlighted in the Karachi Resolution, a political manifesto outlining the future shape of the Indian economy. Thereafter, the Bombay Plan of 1944 and the Industrial Policy Resolutions of 1948 and 1956 laid the basis for the creation of heavy industries and high technology skills based on a system of state capitalism, a necessary prerequisite for an indigenous defence base.

From 1947 on there were few dissenting voices over the need for the country to develop an indigenous defence industry. Because indigenous production could save the country foreign exchange it was supported by those in favour of keeping defence expenditures low. It was also supported by those in favour of an industrial policy based upon import substitution, by those who did not want India to be bound by the ties of alignment and by those who saw India as a significant regional power.

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3 The actual cost of local defence production may greatly exceed the cost of 'off-the-shelf' import but this may be more than offset by foreign exchange savings, particularly during a period of declining terms of trade.

The commitment to defence production increased when the Indian Government responded to first the US-Pakistan strategic relationship started in 1954 and, second, defeat against the Chinese in the 1962 war. Until the mid-1950s, during a period when defence policy was evolving slowly, defence production was limited to small arms and ordnance. In fact, defence production was first started in 1801 when the East India Company established the Gun Carriage Agency outside Calcutta[4]. Partition left sixteen of the ordnance factories established by the British inside India which gave a base on which to build (Pakistan received none). In 1952 the Institute for Armament Studies was established at Kirki with the intention of familiarising officers with military science and technology. In 1954 a new ordnance factory was set up at Ambarnath and Bharat Electronics was established in the same year as a limited company in the public sector under the control of the Ministry of Defence. Between 1955 and 1961 the ordnance factories were completely reorganised which thereafter permitted the absorption of foreign technology in the form of licensed production agreements[5]. The agreement to produce Shaktiman trucks under license from MAN (Maschinenfabrik Augsberg-Nurenberg AG) in late-1958 is a case in point. Also during the mid-1950s, soon after Pakistan had joined CENTO and SEATO, India entered into a licensed production deal with Britain to produce the Gnat and, furthermore, embarked on a programme to build its first indigenous jet fighter, the HF-24 Marut. However, Krishna Menon's attempts to expand the potential for indigenous defence production during the late-1950s actually amounted to very little. Apart from the animosity which Menon created for other reasons within the defence

4 Smith, C. and George [1985], p 366.

5 Kavic [1967], pp.128-129.

community, India's small industrial base and the scarcity of resources, including foreign exchange, limited actual production[6].

The 1964 defence plan which was drawn up after the defeat against China called for an increased emphasis upon indigenous production. After the 1965 war with Pakistan and the experience of embargo by Britain and the US the defence plan was realigned to run concurrently with the Five-Year Development Plan which required revision to cover the period 1966-71. A major objective was that by 1973-74 the country would be significantly less dependent upon arms imports. The ordnance factories performed reasonably well during the late-1960s, especially in the production of arms, ammunition and vehicles, but much less well in the clothing and general stores sections. In addition, the public sector undertakings began to grow in size and output, Hindustan Aeronautics Ltd (HAL) in particular.[7]

Successive Indian Governments have fostered the idea that defence production has been reasonably successful over the years and that a slow but steady progress is being made towards self-sufficiency. In fact, this is not the case. In many instances the public sector undertakings have either not performed well or have been frustrated in their attempts to do so. Many of the claims that systems are 'indigenous' are in fact misrepresentative as increasingly the term is being used to cover production which involves little more than assembly, where the local content is minimal. Although there have been some success stories the quest for self-sufficiency is far from fulfilled and the reasons for this are several.

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6 Wulf [1986], p.127.

7 SIPRI [1971], p.742.

7.2 Indigenous Production for the Army

A major area of emphasis for the domestic defence industry has been the production of tanks. In 1961, against strong competition from West Germany, the British firm Vickers-Armstrong agreed to supply India with the manufacturing capability to produce a modified Chieftain tank at the Avadi heavy-vehicle factory in Madras. The first tank, known as the Vijayanta, came off the production line in January 1965 and some three and a half years later 65 tanks had been received by the Army. However, although the indigenous content of the tank increased, reliance upon British design and know-how remained total and production delays during the late-1960s led to the order of 75 T-55 tanks from the Soviet Union.[8] Although the Vijayanta has experienced performance problems particularly with the Leyland L-60 engine[9], nevertheless the Avadi factory has successfully produced over 1,000 units. In the mid-1980s it was decided upon to equip the Vijayanta with a new engine. At the time it was alleged that the Army Base Workshop in Delhi Cantonment was capable of uprating the engine for the period until a new indigenous main battle tank (MBT) was ready. However, under pressure from a consultancy firm, Usha Services and Consultants, which employs several ex-service officers, the Government considered instead tenders from foreign defence contractors, including the engine designed by Rolls-Royce for the abandoned Shir II project.[10]

8 SIPRI [1971], p.743-744.

9 International Defense Review [April 1986], p.437.

10 Nayar [January, 1984], p.7.

In the early-1970s the Indian Government decided that India's next MBT would be designed and produced indigenously. Both inside and outside India, progress in the field of tank production has been applauded. It is widely held that Avadi is a capable company and that the Defence Research and Development Organisation (DRDO) is equally capable of effecting innovations, witness the development of a mine clearing device which is fitted to the front of some of the Vijayantas. On this basis, the R&D currently under way on the production of an indigenous MBT for deployment in the 1990s is regarded with optimism. However, on closer inspection, there appear to be a host of managerial and technological problems associated with this project.

Plans to develop the Chetak, now renamed the Arjun, the MBT for the 1990s, first began in 1970 and the programme was approved in 1972 following the issue of the General Staff Qualitative Requirements. In May 1974 the government sanctioned Rs.15.5 crores for the initial phase of the programme. Originally the programme envisaged that the engine, transmission and drive would be imported. The DRDO was charged with the task of developing the hull, turret, running gear and gun. In 1976, when it became clear that attempts to acquire a powerpack from abroad were unlikely to succeed, the Combat Vehicle Research Establishment was entrusted with the task of indigenous production. By 1982, it was apparent that little or no success had been achieved,

> "... sources hasten to point out that a specialised process called Alphinbonding technique, in which the cylinder should have been cast, has not been used. Because of this, the present aluminium bonding used in the cylinder often gives way resulting in the establishment of communication between the inlet and

> exhaust ports which should never occur ... The poor casting, it is said, has resulted in a wastage of about Rs.5 lakh, as 50 cylinders had to be rejected. (Each cylinder costs nearly Rs.10,000) ...Certain uncalled for modifications attempted on the tank have also put the clock back on its development. Masking the valves, using compressors to pressurise single-cylinders, and ignoring the equilibrium condition have resulted in a wastage of time and money. It is now reported that top officials are toying with the idea of going in for the next advanced gas-turbine engine for the Chetak...The wrongly-designed camshaft in the transmission group of the engine was also a contributory factor to the engine's low efficiency. The hydro-pneumatic suspension in the hull and turret were utter failures. Besides, the electrical system of the tank has not been fully implemented."[11]

In all other respects, the MBT is reasonably well on course. A new form of armour, Kanchan, has been developed by the Defence Metallurgical Research Laboratory at Hyderabad (and is reputed to rate with the famous Chobham armour produced by Britain), the gun by the Armament Research and Development Establishment and the controls and instrumentation by the Instrument Research Development Establishment at Dehra Dun.

Even if the problems over a suitable power pack for the MBT are resolved there is no guarantee that the project will succeed thereafter. Thus, until the MBT enters both production and service, India will license produce the Soviet T-72 or the T-80 as a stop-gap measure, but for how long this will be necessary remains to be seen. At the time when the MBT is due to go into production, in the early 1990s, the production plant in Madras will be at the point of stabilising production of the tanks produced under Soviet license. The Avadi factory will not be capable of tooling up to produce both tanks without massive investment, the estimated cost being Rs.200

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11 Indian Express [29 June 1982].

crore with the bulk of the investment required by the end of this decade,

> "At present not much thought seems to have gone into the question of where the MBT will be produced, what sort of investment will be needed to manufacture it and other related questions. Unless these questions are examined in depth and the necessary decisions taken in time, we may find that although the MBT project achieves success as a design and development effort, other considerations may prevent it from getting off the drawing board."[12]

In addition, there are other questions to consider, in particular whether or not the system will be acceptable to the Army and whether or not slow progress will render the tank obsolete whilst still on the production line.

By the late-1980s, few of the production problems had been solved and more had emerged. Although a prototype has been produced, the results of an examination by an expert committee was critical on nine specific points,

1) The turret and hull design are not suitable for smooth operations - the turret hits the driver when in an open up position. The driver cannot enter or exit the tank when the turret is facing forwards.

2) The fire control system is neither integrated nor fitted.

3) The loading rate of 15 seconds was unacceptably low.

4) The air defence gun has to be operated by the loader which means that when the the tank is attacked from the air the main armament remains inoperative.

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12 Balachandran [6 December 1982].

5) Only three ready rounds are in the turret area, as against the twelve rounds specified by the General Staff Qualitative Requirements.

6) The shape of the turret is a shell trap.

7) The width of the track has increased beyond the Army's specifications, further reducing the tank's mobility as it cannot now be transported on trains or indeed cross bridges in areas where it is likely to be deployed.

8) The seating positions etc are unsuitable.[13]

Furthermore, very little progress was reported on the ongoing problems of finding a suitable engine. Of the six prototypes produced in 1987, all were fitted with MTU engines from West Germany. After agreeing to the import of 42 engines costing Rs.220 million, it appeared that the order had failed to specify the requirements necessary for successful operations in Indian climatic conditions and the overall cost of the tank has risen by a factor of nineteen[14]. By 1988, however, the Arjun had apparently fulfilled the Army's mobility requirements but problems with the 1,500hp indigenous engine were persisting, such that a 1,400hp MTU engine had been imported for use in the R&D process[15].

The shortfall engendered by the phasing out of the Vijayanta and the delay in producing the Arjun has forced India to rely upon licensed production of Soviet tanks. The T-72M (the most advanced version) is being produced at Avadi, costing $835,000 per unit, and with only 10%

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13 Nigudker [November 1987], p.82. See also, Bobb (et al) [15 June 1987], pp.52-53.

14 Nigudker [November 1987], p.82.

15 Mama [May 1988], p.578.

local content, although it is understood that this figure will over time rise to 95%. In addition to experiencing problems with the MBT, the Combat Vehicle R&D Establishment (CVRDE) has also found it difficult to produce an infantry combat vehicle which has led to the licensed production of the Soviet BMP-1. However, CVRDE has been able to develop ambulance and command post variants of the BMP-1. Finally, a license to produce 200-300 amphibious tanks is being sought from either Sweden, West Germany or the US[16].

Although many of India's future artillery requirements will be met by the Bofors 155mm field gun, which may also be produced under license, other artillery projects are led by the 2,300kg 105mm Indian Field Gun MkII. Costing $1,000 million, production of the field gun is also behind schedule as by 1986 the Army had already formed several units to receive the guns. The Armament R&D Establishment at Pune which is responsible for the field gun is also producing new infantry weapons to replace the aging Ishapore rifle. A variety of ammunition, propellants and explosives are being developed by the DRDO.[17] However, a much more innovative process is the development of a sophisticated command, control and communication system (C^3I), the Army radio engineering network (AREN). Development of this system has been underway for over seventeen years and appears to have been completed in 1988 at a cost of Rs.500 crore[18]. It is alleged that a follow-on system, the Integrated Services Digital Network, has already started[19].

16 International Defense Review [April 1986], p.438.

17 International Defense Review [April 1986], pp.438-441.

18 Mama [March 1988], p.259.

19 Gupta [15 Novemeber 1985], p.58.

Although some of the projects earmarked for the Army have been badly delayed, indigenous defence production in this quarter appears to have run much more smoothly than in other areas, such as aerospace, albeit with time and cost overruns. There are several possible reasons for this. First, the level of technology required by the Army may be easier for R&D establishments and the public sector enterprises to come to terms with and control than obtains in the aeronautics sector, for example. Second, the degree of indigenous content may be relatively small, witness the mere 10% involved in the production of the T-72M. Third, the Army could be a more compliant customer than the other two services and mind less accepting either Soviet-license or indigenous equipment.

Nevertheless, there are evident anomalies which suggest problems in the procurement process which militate against the further development of indigenous capability. Why have the ordnance factories failed to develop beyond the 105mm gun? Why did India buy Rs.10 crore worth of parachutes from South Korea and France when the same are manufactured in Kanpur? Why were 1.4 million blankets purchased from Australia in 1985 during a period when most Indian woollen mills had export capacity? Why were 1,000 passive night goggles imported when the indigenous variety could have overcome the Army's objections by using a small imported component at a fraction the cost of the whole imported item? Similarly, why were 3,000 pieces of illuminating ammunition for 81mm mortars imported when the indigenous variety required only to have its fuse replaced by an imported one?[20] Why has the licensed production of Soviet equipment

20 All these examples from Gupta and Chandran [15 April 1986], p.41.

led to a cramping of indigenous capability, witness the agreement which has allowed the Soviet Union to take over many of India's Army Base Workshops to set up repair and manufacturing facilities for Soviet weaponry[21]? Could Indian technicians not have been trained for the task? Why has the decision been taken to procure a very large number of Soviet T-72 tanks if success with the indigenous MBT is on the horizon?

7.3 Indigenous Production for the Navy

Naval shipbuilding in India was retarded during the early stages by financial stringency, although a design laboratory was set up in Bombay soon after independence. However, it was not until 1955 that the Government paid any attention to naval construction which came in the form of local orders for inshore minesweepers and seaward patrol craft and other minor vessels[22]. In 1960 the Government acquired a major shipyard, Mazagon Docks Ltd in Bombay and the Garden Reach Workshop Ltd in Calcutta[23]. A more significant shipbuilding programme was eventually initiated in 1964 following an agreement with Britain which enabled India to construct the Leander class frigate at facilities constructed at Mazagon Docks. The first vessel was laid down in 1966 and completed in 1976. The sixth and final vessel, INS Vindhyagiri, was completed in 1980. The experience gained on the Leander programme facilitated the development of the

21 Bobb [31 August 1984], p.84.

22 Kavic [1967], p.135.

23 Wulf [1986], p.139.

Godavari class frigate which, at 3,500 tons, is larger and better armed than its British counterpart. This programme consists of six frigates all of which are heavily armed for their tonnage[24]. Although Mazagon dockyard built the hull and propulsion plant, the input from foreign designs is not clear. However, machinery, missiles and the fire control system have been imported. As a follow-on programme a new class of warship has recently been announced; 'Project 15' will design 5,000 ton frigates which will have an indigenous content of 85%[25]. However, as with other areas of the Indian defence industry it has never been made clear how the percentage of indigenous content is calculated[26]. In addition, India is also anxious to acquire submarine technology and construction capability. To this end a deal was agreed with West Germany in December 1981 for two Type-209 submarines to be constructed at Kiel but with an option to build four additional vessels at Mazagon Docks. Construction of the required facilities began in January 1982 but have since been terminated by the Government due to West German dealings with South Africa.

In addition to Mazagon Docks, other public sector companies are the Garden Reach, Praga and Goa shipyards. The Indian Navy also has a burgeoning shipbuilding capability. The 700-acre naval dockyard at Vishakhapatnam is the largest dry dock in Southwest Asia with a

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24 International Defense Review [October 1986], p.1563.

25 Jane's Defence Weekly [5 December 1987].

26 For example, when the author visited a defence exhibition in Delhi he was informed that an anti-tank missile on display was 80% indigenous. When the company representative was asked to point out the foreign components from the knocked-down version it appeared that at least half the components on display were imported.

workforce of over 7,000 and the capacity to service fifty ships simultaneously. Although the Soviets, who constructed the facility, are keen to keep it within their orbit, some Rs.300 crores is being invested into the dockyard to permit the repair of ships and, eventually, submarines which are not of Soviet or East European design.[27] Also, under construction near Karwar in Karnataka is a new naval base. Expected to cost around $1.5 billion and be operational by 1996, the base will cover 3650km, have 4.5km of berthing space and will involve the relocation of at least 30,000 local people. The base will be able to handle shipbuilding, maintenance and refitting facilities.[28]

Since the acquisition of a second aircraft carrier following the acceptance that a wider naval role is now called for, speculation is rising as to the future direction of procurement once the first aircraft carrier, Vikrant, is retired before the end of the century. Providing the naval mission is maintained, and there seems no likelihood that India's naval presence in the Indian Ocean will be reduced, an extra one or possibly two aircraft carriers will be required - the third to ensure continuity of presence given the amount of time these ships spend in dock. Recently, Admiral Tahiliani, Chief of Naval Staff, has stated that all future aircraft carriers for the Indian Navy will be produced indigenously. Reports quoting former Defence Minister Arun Singh suggest that the Navy has already carried out preliminary design studies on a replacement for

27 Defence Market Report [1985], p.9.

28 Jane's Defence Weekly [15 November 1986], p.1144.

the Vikrant but that the door has also been left ajar for a foreign design[29]. A likely place for construction is the shipyard at Cochin.

The performance of the Mazagon Docks has not been spectacular. Part of this can be explained by the global recession in, and the traditional low profitability of, shipbuilding. However, it has also been the case that the inherent problems have been compounded by poor management, particularly during the period when N.K. Sawhney was the chairman and managing director when productivity, efficiency and orders plummeted. In the space of two years the number of ships brought in for repair dropped from 3,000 to 600 in the space of two to three years[30]. In contracts with the Indian Navy, these problems have been particularly damaging. In the case of ship construction for the Navy, prices are fixed on a cost plus basis giving 5% profit on the original estimates. Any escalation of cost has the effect of reducing an already low percentage of profit. Yet, in the absence of any suitable system for supervision, production planning, quality control and monitoring of costs, slippage is almost certain to occur. On the non-military working of the dock the Estimates Committee found that,

> "A detailed examination of an export order for six cargo vessels to a U.K. based shipping company during 1977 to 1979 revealed several deficiencies affecting cost efficiency and profitability. There was delay ranging from 12-15 months from the due dates in the delivery of these vessels and the company suffered a heavy loss of Rs.554.26 lakhs as against the anticipated profit of Rs.84.72 lacks. The main factors responsible for this state of affairs were defective estimates, inadequacy of design capability, lack of proper production planning and control, inadequate supervision and deficiencies in quality control. Under-estimation of labour and materials resulted in a loss of about Rs.19 lakhs in one

29 International Defense Review [March 1987], p.359.

30 India Today [31 December 1986], p.68.

> vessel alone. Further, lack of data bank for designing of various types and sizes of cargo vessels resulted in errors in working drawings which caused rework resulting in delay in execution as well as excess consumption of labour and materials."[31]

In 1985-86, the situation was little better. Mazagon Docks accrued a loss of Rs.389.7 million and Garden Reach and Mishra Dhatu Nigam[32] also returned losses of Rs.78.9 million and Rs.49.9 million respectively[33].

There are four main reasons for the apparent lacklustre performance of the Indian naval construction programme. First, the Navy is a junior, not a senior service. Even though naval commitments are rising significantly, the emphasis upon indigenous production is of barely more than two decades in duration. Whilst naval policy continues to be geared to sea control and, furthermore, has developed a blue water perspective there are limitations upon how much the Government can commit to the naval programme given the competing claims of the more powerful Army programmes and the more prestigious aeronautics programmes. Inevitably, the naval construction yards will suffer from a lack of follow-on orders. Using the occasion of the launching of an inshore patrol vessel in 1985, the chairman of Garden Reach stated pointedly,

> "Orders in the pipeline are poor ... we keep reminding government of this issue."[34]

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31 Committee on Public Undertakings [1983], p.18.

32 This public sector enterprise is located in Hyderabad and major activities include gun barrel forgings, specialised metals and alloys for weapons systems and aerospace.

33 Mukherjee [20 June 1987].

34 Jane's Defence Weekly [20 July 1985].

Second, the expense of setting up naval construction facilities should not be underestimated. The capital investments required for the basic infrastructure are very large and combine with low profitability to reduce the appeal of an across-the-board commitment, witness the ongoing debates in the West regarding the viability of building and deploying large capital ships. Third, advances in design and the attainment of technological change are not easy. Shipbuilding design is now more complex than ever and almost impossible to keep abreast of without, for example, Computer Aided Design facilities and India does not possess the required sophistication in other sectors to furnish such requests. Finally, the primary role of the Soviet Union as supplier of naval technology and weapons platforms has not provided the required impetus to the process of indigenisation of defence production. As a rule, the Soviets are reluctant to transfer technology and assistance to permit the full absorption of know-how, although this policy has shown signs of change in recent years. This is certainly the case with the aeronautics industry - the Subramaniam Committee recommended that dependence upon the Soviet Union for licensed production should end at the earliest possible time to facilitate a less pedestrian rate of indigenisation. The committee also observed several deficiencies in the quality of the technical data and information offered by the Soviets[35].

35 Subrahmaniam Committee [1968].

7.4 Indigenous Production for the Indian Air Force

The majority of aeronautic defence production in India rests with Hindustan Aeronatics Limited (HAL), the largest public sector enterprise which employs today approximately one-third of the defence sector employees, c.42,000 people. The history of HAL dates back to the 1940s when Hindustan Aircraft was set up to repair and overhaul foreign aircraft. Soon after independence the company began building light trainers under license before attempting the production of jet aircraft in the 'fifties. In the early 1960s Hindustan Aircraft began the licensed production of the Folland Gnat and the Rolls-Royce Orpheus jet engine. Simultaneously, research and development on the Marut and Kiran began, both aircraft were closely modelled on the Hawker Hunter and Hunting Jet Provost respectively[36].

In 1964 Hindustan Aircraft merged with another Indian company, Aeronautics, to form HAL. Since that period there have been two major thrusts to the production work of the company with minimal linkage between the two. At the Nasik, Koraput and, to a lesser extent, the Lucknow factories HAL produces Soviet aircraft under license. At the other factories in Kanpur, Hyderabad and Bangalore the company produces the aircraft of several West European aerospace companies under license and, in addition, undertakes research and development into aircraft and aeronautics design and development. The Bangalore complex is the main centre of research and development and the headquarters of the company.

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36 Velupellai [8 November 1980], p.1179.

One success story in HAL has been the production under license of the MiG-21 series - the MiG-21FL interceptor, the MiG-21M ground attack aircraft and the MiG-21bis. By the time the production line was closed down in 1985 to make way for the production of the MiG-27M, some 500 units had been produced. In comparison with HAL's performance in other sectors, the progress on the MiG-21 has been relatively smooth. Production rates were consistently high and close to target and the IAF found the MiG-21 a dependable system. Part of the reason for the success can be explained by the fact that the MiG-21 is a relatively simple plane utilising Soviet technology of the 1950s. In addition the Soviets agreed to a precise and even-handed process of technology transfer which took place in five stages. In the first stage all the aircraft were imported. In the second stage all the aircraft were tested in India. Third, all the equipment was assembled and tested in India and, fourth, sub-assembly was undertaken in India. Finally, attempts were made to reduce dependence upon raw materials. Eventually, only the designs, drawing and some of the more complicated materials were imported. This amounted to approximately 70% indigenisation in toolings and equipment with 20% of that proportion supplied by ancillary industries under sub-contracting agreements. However, production of the MiG-21bis proved more difficult. Selected in 1976 as a successor to the earlier MiGs tooling up for production started in 1977 with the objective of providing 150 examples before the line was due to be closed in 1984. However, it took until January 1983 for the first locally-assembled aircraft to complete its flight tests.[37] Also, indigenous production of the MiG-21 series was an expensive venture for India. The cost of producing the MiG-21 in India was 193% more

37 MILAVNEWS [March 1983], p.15.

than its imported cost, according to an estimate by the Stockholm International Peace Research Institute[38].

However, a particular problem in the MiG agreement with the Soviet Union has been the supply of raw materials. In this area the Soviets are frequently unwilling to supply raw materials in the small quantities which are often required. Nor are there alternative suppliers of these materials in the West. In addition, the materials are often extremely cheap which acts as a disincentive to indigenisation, the transfer to which is always expensive. HAL's attempts to nurture local industries have only been partially successful. Indian Aluminium Co. has been encouraged to take up the production of aluminium sheets which are required in large quantities; as yet there is no indigenous source for aluminium sheets of the required two meter width of sufficient quality. A factory has been set up in Hyderabad to produce approximately thirty types of materials required by HAL, including stainless steel and nickel alloys. The Soviet Union is actively assisting these developments. Another problem with the Soviets stems from those items which have a short life, such as adhesives and rubber items. It has been difficult to persuade the Soviets to export in the quantity and frequency required. Also, the Indian MiGs are used more frequently than their Soviet counterparts and as a result the demand for brake pads which require replacement after every 100 flights is much higher.

These problems are relatively minor when compared with the overall success of the venture. Still more positive is the future of Indo-

38 SIPRI [1971), Table 22.10, p.739.

Soviet collaboration in the aeronautics field. In July 1983 Defence Minister R. Venkataraman visited Moscow and returned with a commitment regarding license production of the MiG-27 Flogger and manufacturing rights for the MiG-29 Fulcrum. To the surprise of some the offer was confirmed during the visit in March 1984 of a 70-strong, high level, Soviet defence team led by the former Defence Minister, Dimitri Ustinov. Some 300 units of both systems are expected to enter service with the IAF. Whilst the Soviet side of HAL appears to have reached the expectations of all concerned, the same cannot be said of the other HAL complexes for it is in these quarters where technological and managerial failures have been most consistent and damaging. In the early period, between 1940 and 1956, India's aeronautic capability was limited. The first license agreement was for the production of the American Vultee Vengeance bomber. Between 1947 and 1950 about fifty British Percival Prentice basic flight trainers were assembled at Bangalore. This was followed by the manufacture of Vampire jet aircraft and 150 DH-82 Tiger Moth primary trainers under an agreement with de Haviland of Canada.[39] Following agreements struck in 1956, India started to produce the Gnat lightweight fighter powered by the Orpheus-701 turbojet engine in 1959 and deliveries of the Gnat to the IAF commenced in 1963. The original idea came from Lord Mountbatten who suggested the possibility to Nehru after the Gnat had failed selection as a NATO fighter[40].

Although the acquisition of the Gnat was widely held to be a good move for India, even though it had been rejected by NATO,

39 Thomas [1978], p.180.

40 Mullik [1972], p.125.

nevertheless, negotiations with Folland were long and drawn out. After a team of experts from the IAF and the MoD had inspected and approved of an initial procurement of 50-100 units to be followed by licensed production, negotiations became increasingly slower and more complicated. At the same time a group of French intermediary negotiators had approached the managing director of Folland to offer their services for a payment of 2½% 'consideration money' of which 1½% would be given to the Indian negotiating team. Basically, the IAF had cooled towards the Gnat deal over the course of time preferring instead the French Ouragan. One year later the Gnat deal had still not been signed as officers in the MoD had held up the contract having been approached by a French firm which offered to sell India the Ouragan. Even after a strong intervention by Nehru the contact was still not signed for another six months. Nehru was disturbed by the suggestions of malpractice amongst senior IAF officers, and confused as well,

> "He [Nehru] said that it was surprising that whereas every country wanted to produce her own war material, in India even very senior officials and Ministers wanted to remain dependent on foreign countries and governments for military hardware and would not take any initiative for local production. These people did not understand that a country must not remain for ever dependent on another country for her military requirements as, in the event of a war breaking out, that country could stop supplies putting the receiving country in dire difficulties when her need was most acute."[41]

However, this was not a problem unique to the procurement of the Gnat and has been a factor in aircraft procurement even up until to present.

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41 Mullik [1972], pp.125-131.

The Gnat was a great success for both HAL and the IAF. During the 1965 war it performed extremely well due mainly to its mobility, its small size and its utility at the Forward Edge of the Battle Area. A major advantage for India with the Gnat was that Folland went into liquidation in the late-1960s. The RAF wanted the Gnat only for the Red Arrows, a non-combat display team. When Folland folded India was able to purchase most of the technology - the residual rights (80%) went to the IAF. Whilst the RAF kept the physical assets India received the rest including the design jigs and the test facilities[42]. This success led to the production of over 200 units allowing HAL to achieve economies of scale. Eventually 85% of the airframe and 60% of the engine were produced indigenously. However, against this success was the high accident rate of the Gnat due probably to the low-altitude problems with the longitudinal-control and hydraulic systems. These faults were rectified in the modified Gnat Mark I, the Ajeet, but not to the satisfaction of the IAF.[43] Production of the Ajeet has recently been discontinued, a decision which is less popular with civilian specialists than with the IAF - the Ajeet had a good reputation for combat performance and its low radar signature was increasingly valued. However, against this the IAF did not like the Ajeet's relative lack of speed and its single engine.

HAL's major project in the 1960s was to produce indigenously a supersonic fighter, the HF-24 Marut. The project was conceived by Nehru and Menon as a means towards self-sufficiency. In this respect it was not dictated by military need and a qualitative assessment of

42 NagChaudhri, conversations with the author.

43 Graham [1984], p.171.

Pakistan and Chinese capabilities. The project began in 1956 under the direction of an expatriate German, Kurt Tank, who was previously Focke-Wulf's war-time chief designer and responsible for the Kondor maritime bomber and the FW190 fighter[44]. The first stage of the project was to be the production of a supersonic fighter airframe to be followed in the second phase by the design and manufacture of an indigenous engine with a Mach capability. The aircraft was intended to satisfy the IAF's demand for a fighter-bomber. It was designed as a twin-engined aircraft with a 1.4/1.5 Mach speed capability.

Unfortunately, India's first attempt at joining the élite group of international aircraft producers did not proceed at all smoothly. There are four contributing reasons for the failure of the Marut. First, the Indian government failed to strike a suitable agreement for the engine. The first four HF-24 MkI were handed over to the IAF in May 1964, an interim measure pending the production of three squadrons of the HF-24 MK IA which was to be powered by the Bristol Orpheus 703 Reheat engine produced by HAL under license[45]. However, in order to achieve supersonic speeds the Marut required a more powerful engine. India had hoped to purchase the Bristol Orpheus 12 from Rolls-Royce which was under development. In the event the aircraft for which this engine was being built was rejected by NATO and work on the project was curtailed[46]. The Indian Government then asked Rolls-Royce to upgrade the Orpheus 703. When the company requested £1 million for the project Menon refused[47]. Unable as well

44 SIPRI [1971], p.735.

45 Kavic [1967], p.197-198.

46 Graham [1984], p.170.

47 D. Raghunandan, conversations with the author, (10 October 1984, Delhi).

to provide the finance to see through the completion of the Orpheus 12 project and without the contract provision to force the project to be completed, that door too became closed[48]. There followed a number of frantic efforts to acquire a suitable engine. It has been suggested that Bristol Siddeley co-operated with the Indian Government on a scheme to modify the Orpheus 703 power plant by adding boosters from the Soviet VK-7 to achieve a substantial increase in thrust and a barely supersonic version of the HF-24 designated the HF-24 Mk.IB[49]. Other attempts to acquire a suitable engine were from the Soviet Union (RD 9-F) and another from a German-Spanish-Egyptian engine (E-300) but both failed[50]. After the 1967 Arab-Israeli war, the Indian Government considered collaboration with Egypt to produce a supersonic engine. The project failed largely because of the lack of interest on the part of the Egyptians[51].

The second reason for failure lay in the design strategy. A fundamental tenet in aircraft design is that an airframe should always be designed around the engine and not vice versa. The decision to develop the Marut was a political one and, as such, the decision makers were relatively unconcerned with the technical problems. Furthermore, Kurt Tank was an aircraft designer not an engineer. Aircraft designers are trained in a systemic fashion and consider that a project is essentially the sum of its component parts. In the absence of strong direction from the MoD, problems of

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48 Graham [1984], p.170.

49 Kavic [1967], p.204, fn #37.

50 Graham [1984], p.170.

51 NagChaudhri, conversations with the author, (15 October 1984).

coordination and conception arose. Eventually, the problems in the design severely disadvantaged HAL's attempts to convince the IAF and the MoD that an acceptable system had been produced. There was a serious defect in the fuselage design which resulted in an unacceptable level of tail drag. In the 1970s HAL attempted to update the Orpheus engine without outside assistance by adding an afterburner. The developmental work was done by the Gas Turbine Research Establishment. However, a mistake was made in not adding to the afterburner a bypass to provide additional air for the required mass. The test plane exploded killing the test pilot.[52]

The third reason lay in the overall approach to the project. At no point is it possible to identify a well orchestrated attempt to weigh the views of the military, the politicians and industry. Instead, the progress was linear, as the project proceeded it passed from the hands of the politicians, to the military and finally to industry. Or, put another way, the politicians defined the possibilities, the military defined the problem and industry was left to define the answer. The failure to acquire an appropriate engine was in part due to a series of unfortunate coincidences exacerbated by poor foresight and financial stringency. Yet it was also due to the Government's failure to sanction the development of an engine design team. Valuable experience had been acquired on the Gnat project through reverse engineering but it was not utilised for the Marut. Unlike the Chinese, Brazilian and Israeli defence industries, for example, the Government had no confidence in HAL's reverse engineering capability and at no point was HAL's capability assessed. These

52 NagChaudhri and Raghunandan, conversations with the author (15, 10 October 1984, Delhi).

problems were compounded by the approach of the IAF to HAL's efforts. The IAF is well-trained at the operational level but insufficiently conscious of technology. In the case of the Marut the IAF did little to assist with the design faults when they occurred.

In addition, the IAF have little confidence or interest in indigenous technology, which was made very evident early on when the outright purchase of the French Orpheus was preferred to the licensed production of the Gnat. In many instances the preference has been to buy from abroad and, in all probability, the lack of faith in the HF-24 project is linked to this characteristic.[53]

A final explanation for the failure of the project lies in the leadership capabilities of Kurt Tank. Despite his confidence and capabilities Tank was something of a failure in this project. He failed to gain the commitment of his design staff. Although he trained his designers well and gave them confidence in their capabilities, he was rigid in his approach to design. The IAF had no respect for his abilities and displayed little interest in coordinated work to solve the tail drag problem on the Marut. Tank, himself, was more inclined to blame the lack of engine power rather than the tail drag for the failure and when the time came to lobby for more funds to rectify the aircraft's problems he procrastinated.[54] Eventually, production of the HF-24 did commence

53 D. Raghunandan, conversations with the author, (10 October 1984, Delhi).

54 NagChaudhri, conversations with the author, (18 January 1984).

but only 145 instead of a projected 214 aircraft were built and the Marut never flew at supersonic speed[55].

Another failure for HAL in the 1960s came in the attempt to produce under license from Hawker-Siddeley the HS-748 transport plane. The aircraft performed badly which led to decreased demand and high unit costs and Indian Airlines refused to take up its promised order of 180 units and accepted only seventeen. The IAF was forced to take up the remaining twenty-four planes which were produced before the production line was closed down. The project resulted in the loss of Rs.3.4 crores. However, against these failures must be set the limited success of the HTJ-16 Kiran Mark I and II, a jet engined trainer. Here the strategy was significantly different. Unlike the experience with the Marut, it was decided not to attempt to produce a state-of-the-art aircraft but instead to build upon past successes.[56]

Following the failure with the Marut, the fortunes of HAL changed significantly. Certainly resources continued to be invested in the industry and, indeed, its scale of operation increased. However, neither the MoD nor the IAF were prepared to entrust any major project to the company. By the 1980s over 700 engineers were employed in the design sector but the company's order books were lamentably empty. Many good employees left the company and a large proportion must have found jobs outside the country, thereby adding to the braindrain of the 1970s and 1980s.

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55 Graham T. [1984], p.170.

56 Graham T. [1984], p.170.

At one point during the 1970s it seemed as if HAL's helicopter division in Bangalore would be more fortunate than their counterparts in the aircraft divisions. The question and possibility of an indigenous helicopter first emerged in 1969. In September 1970 the Government concluded a ten year technology transfer agreement with the French firm, SNIAS, in relation to the development and production of an Advanced Light Helicopter (ALH) for the 1980s. Naturally, the project was assigned to HAL and ten payments of $750,000 were made to SNIAS. Underpinning the collaboration agreement was the need to establish helicopter design and development facilities to ensure that the next generation of helicopters would be of Indian design and manufacture. A part of the role of the SNIAS technical advisor was to co-ordinate design concepts, undertake a training programme for designers and to prepare joint feasibility studies and project reports.[57]

Established in 1974, the helicopter division of HAL produced helicopters under license and by the mid-1980s had produced more than 400 Chetaks (Alouette III) and Chetahs (Lama). However, although the agreement with SNIAS for the ALH was signed in September 1970, the project was not sanctioned until February 1976. Part of the reason for the delay was the 1971 war which led to financial constraints in the years after. Although design work was initiated, the construction of the relevant facilities was held back for six years. Moreover, even after the project was sanctioned, delays and changes continued to occur. In 1977 the entire concept of the project was changed. A revised Air Staff Requirement (ASR) issued in February 1978 by Air Headquarters requested a radical change in configuration

57 Public Accounts Committee [1982], p.18.

in the form of a twin-engined model. This design change alone cost Rs.5,400,000 and delayed procurement by at least 15-18 months. Moreover 54.5% of the French financial and technical assistance remained unutilised and only two-thirds of the sixty hours of free flying included in the contract was eventually taken up.[58] In 1982 the Public Accounts Committee remarked that 'the project which was initially expected to fructify in the early 1980s is still at the drawing board'[59]. Up until 1986 this remained the situation. Although future work within the helicopter division will be related to the ALH, its configuration is still uncertain,

> "With a take-off weight given as 4,000kg (8,800lb) and a capacity of 10-12 passengers, the ALH is no longer a "light" (the original single-engined design had a maximum take-off weight of 2,500kg/5,500lb for the IAF and 3,000/6,600 for the Navy version). Choice of powerplant is now stated to be two TM3333s or two PT6-35E/1s, which indicated that the Gem 43 is no longer in the running."[60]

In mid-1984 it was announced that a deal on technology transfer with West Germany was imminent. A helicopter which was first proposed in 1970 may now enter service, possibly, in 1989[61].

The long drawn out, expensive and oscillating history of the ALH was mirrored in the instance of the HP-32, a single-piston engined basic trainer. Although this aircraft is far from the cutting edge of aeronautic technology, the time lags and delays in defining IAF requirements were extensive. Despite the fact that expertise from the HT-2, the existing trainer, was readily available within HAL it

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58 Public Accounts Committee [1982], pp 19-21.

59 Public Accounts Committee [1982], p.31.

60 Mama [1984], p.151.

61 MILAVNEWS [July 1984].

took two and a half years for the IAF to identify the required changes to the new system and its operational requirements. It then took a further five and a half years for the Air Headquarters/Department of Defence Production (DoDP) to conclude that the Revethi MkII under development by the Directorate General of Civil Aviation (DGCA) would not meet the requirements of the Air Force. Although HAL produced a feasibility report in February 1969 it was kept in cold storage until September 1974. Once again through fluctuating Air Staff Requirements and minimal co-ordination between the DoDP, Air Headquarters, DGCA and HAL, further delays occurred.[62] In May 1985 the first HP-32 came off the production line at the HAL Kanpur division, seven years after the first prototype flew.

In November 1967 the MoD appointed a committee under the chairmanship of C. Subramaniam, whose terms of reference were to assess Indian requirements in respect of aircraft and related equipment. In its report of the following year, the committee concentrated not just upon force levels but also upon the relationship between licensed and indigenous production. It is in this report that the inherent conflict between the two approaches to the acquisition of technology was made specific. The Committee stressed a number of points which retard the growth and self-sufficiency of an aeronautics industry which, as in the Indian case, is far from lacking in ability and enthusiasm. The Committee was extremely critical of the IAF for its unwillingness to consider technological needs in relation to threat perceptions, a point made by Blackett two decades earlier and equally unpopular then with the armed forces,

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62 Public Accounts Committee [1982b].

> "The presentation by Air Headquarters did not include a statement of the tasks in terms of the threats faced by the country as determined by the Government and communicated to Air Headquarters. This is a basic requirement for any long terms plans within the country. When this task was taken up with the Ministry of Defence in December, 1968, they took the view that the assessment of requirements for the Air Force was outside the terms of reference of the Aeronautics Committee. The Ministry of Defence stated, that given the requirements of the Air Force over a period of ten years, the Aeronautics Committee should recommend measures for the planned development of the Aeronautics Industry, so that these requirements be met by manufacture within the country, in the shortest possible time and in the most economical manner."[63]

Although the Committee accepted the problem of threat assessment in principle, it was clearly offput by this apparent declaration of non-cooperation on the part of the Air Force,

> "The purpose of the critical assessment is to ensure that the requirements are reasonably spelt out and not likely to be changed easily; that they take account of resources; that they are moderated, to the extent feasible, by the technological capability of the country ... Our defence posture, defence positions and defence priorities cannot be taken at present value even for the next decade. We have to deal with a changing situation. It is, therefore, important to recognise that the necessary exercises cannot be undertaken by any individual in any position. They have to be undertaken by organisations which have built up the necessary competence for the task. It is possible that the hesitation of the Ministry of Defence to explore the basis of the requirements arises from the handicap that none of the existing organisations has developed the competence to undertake the appropriate task."[64]

In its final recommendations the Committee castigated the Air Force for imposing upon HAL in 1966 Operational Requirements for a ground attack fighter which were unrealistic in relation to industrial capacity and affordable costs[65]. In relation to the role of the

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63 Subramaniam Committee [1968], pp.62-63.

64 Subramaniam Committee [1968], pp.63-65.

65 Subramaniam Committee [1968], p.310.

services in defining threats and requirements, the Committee recommended the creation of expertise in research institutions outside the defence establishment to assist with assessing the relative costs and claims of defence requirements - a form of defence policy research institute[66].

There were two other significant recommendations contained in the Committee's report. First, the Committee recognised that due to production under license, the design teams at Bangalore had not developed in step with production facilities; in 1968 the design team at Bangalore employed a staff of 335, a mere 20% of the labour force and a much smaller percentage than obtained in the West European and North American defence industries. Moreover the Committee expressed enormous reservations over the wisdom of production under license as a means to technological self-sufficiency. On the issue of the choice of ground attack aircraft for the latter half of the 1970s, the Committee was unequivocal,

> "One way would be to introduce a new ground attack aircraft through manufacture under license. We do not favour it. This would be yet another type of aircraft to the five types which would be in service during [the] 1974-79 period. Secondly, such a decision would be based on inadequate appreciation of the HF-24Mk1.R under development or of the potential for further development in the HF-24 aircraft. **It is our finding that licensed production inhibits indigenous development; in the present case it would completely extinguish development.**" (emphasis added) [67]

In the event, however, this is virtually what happened. Starved of major design projects for over fifteen years, by 1982 some 70% of

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66 Subramaniam Committee [1968], p.83.

67 Subramaniam Committee [1968], pp.67-68.

production capacity at the Bangalore and Kanpur complexes had fallen idle[68].

The second set of recommendations from the Committee concerned management and organisation, about which there was considerable criticism. At the wider level, the Committee echoed the criticism of an earlier report prepared by a team of Swedish defence experts that research institutes were excluded from the planning process, that scientific expertise was not properly utilised and that productivity was low,

> "Thus it was stated that 7,500 manhours had been used to manufacture 18 tools for the HF-24 which is an average of about 400 hours per tool. The manufacturing time per tool for a corresponding type of aircraft in Sweden is about 40 hours per tool."[69]

Elsewhere, the Committee commented that "if research establishments and the industry were involved in the formulation of weapons policy, their inventive skill could make a real contribution"[70] - a virtually identical statement to the one made by Patrick Blackett (see p.165) concerning defence science organisation. Equally important, the Committee was critical of the way in which policy making was executed. Its criticism of the Air Force has already been noted, but, in addition, its denunciation also turned on the ad hoc nature of decision making beyond the political level and the extreme atomisation amongst the research, manufacturing and military sectors,

> "The principal aircraft requirements relate to the Air Force. Hence, the relationship between the Air Force as the indentor and the industry is important; in fact, the success to meet the Air Force requirements by manufacture

68 Sapru [28 June 1982].

69 Subramaniam Committee [1968], p.183.

70 Subramaniam Committee [1968].

> within the country depends upon complete understanding and [a] good working relationship between them."[71]

An earlier committee under the chairmanship of J.R.D. Tata had recommended in 1963 both the centralisation and rationalisation in the aircraft industry to promote the orderly and co-ordinated development of aircraft, propulsion, armament including missiles, electronics, testing and evaluation. Although the recommendation was accepted in principle by the MoD, it was later rejected on the grounds that the ministry did not want aeronautics R&D to be entrusted to an authority outside the R&D organisation. The Subramaniam Committee reiterated Tata's recommendations by proposing a Requirement Policy Committee and better management practices.

The Subramaniam Committee report was never made available for wider comment and debate. However, it is fairly clear that the recommendations of the Committee plus those of previous committees and consultative bodies went relatively unheeded. Planning for aeronautic self-sufficiency remained atomised and all too dependent upon the requirements of the IAF which took little or no account of industrial capabilities and constraints.

7.5 The Light Combat Aircraft - Forward to the Past?

The long term fortunes of HAL were revived in the early 1980s after increased lobbying directly to the Prime Minister and her Secretariat. The result was a rise in the level of commitment to indigenous development and production in the defence sector. The

71 Subramaniam Committee [1968], p.303.

most important was the proposed development of a Light Combat Aircraft (LCA), originally planned for production by 1994 with a prototype to be ready by 1990.

In mid-1983 reports first appeared regarding the Indian Government's commitment to the development of an LCA to be powered by an indigenous engine[72]. British Aerospace emerged as the clear contender for the relatively limited collaboration envisaged by the decision-makers given the complexity and ambitious nature of the project; by late-1984 reports continued to suggest that British Aerospace would would be a partner to the project[73]. Much of this optimism stemmed from the companies' continued presence in the Indian defence industry based on the Jaguar DSPA licensed production agreement as opposed to the disappointment suffered by the French with the Mirage 2000. However, by early-1984 the Indian Government had invited foreign companies to prepare feasibility studies which would involve collaborative development even though all production and marketing was to take place in India. The technology required from abroad was considerable; composite material technology, cockpit displays and active controls with electronic sensing and signalling.[74] The significance of the commitment to indigenous capacity was reflected in the budgetary arrangements. By 1990 the project was expected to have cost Rs.12-15 billion but only 10% of the development budget was allocated for foreign consultants[75]. The response both inside and outside India to such an ambitious project

72 MILAVNEWS [June 1983], p.10.

73 MILAVNEWS [October 1984], p.19.

74 Wood [14 January 1984], p.13.

75 Mukherjee [16 March 1985], p.437.

was mixed and before long the LCA became extremely controversial - experts questioned costs estimates, the aeronautic establishment's ability to deliver and the level of indigenous content.

In mid-1985 the project was adversely affected by the unexpected resignation of two of the key personnel within the Aeronautical Development Agency (ADA), the apex body set up to oversee the design and development of the LCA. The creation of the ADA itself had been a significant step. In other areas of big science, such as space research and nuclear energy, departments had been set up many years before in an attempt to co-ordinate diverse activities in a systematic manner and provide a recognised decision-making locus. In the field of aeronautics a similar development did not occur which severely handicapped linkages between the R&D establishments and industry and the more general need for long-term planning and related decision-making.

> "The bureaucratic viewpoint was that in the absence of an aircraft development programme there was no need for technology development - a tragic error of judgment - which prevails even today. Any discussion on planning for LCA mission orientated R&D and technology development programmes and fall back positions invited sarcastic comments of planning for a fall back aircraft; any suggestions to plan for integration of R&D and the industry and referring to early committee recommendations were thought to be greed on the part of the people making such suggestions."[76]

The creation of the ADA should have been a step in the right direction and a means of channeling the country's R&D capabilities into a single project which involved 50 companies and over 600 work packages. Unfortunately, this proved not to be the case and although the ADA was given the responsibility for setting up the LCA

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76 Valluri [8 March 1986], p.12

programme, the authority to ensure that its decisions were implemented was lacking. The result was the resignation of two key figures; S.R. Valluri, the Director of the National Aeronautics Laboratory in Bangalore and the Director General of the ADA, and India's chief aircraft designer and leader of the ADA design team, Raj Mahindra. In addition, Valluri had been asked by V.S. Arunachalam, Chief Scientific Advisor to the MoD, to remove Mahindra from the ADA following allegations in Parliament relating to the latter's citizenship and patriotism. Furthermore, Arunachalam seemed keen to involve a number of younger designers in the project, which Valluri considered an immense mistake. Aircraft design, he maintained, is in essence a product of accumulated experience which requires a person of experience at the top and a hierarchical organisation and Mahindra was the only person in India who could perform a similar role to, for example, that of Mikoyan in the USSR[77]. Valluri's views on organisation received considerable support. For example,

> "Valluri's views about organisational linkages between ADA and HAL were echoed by a HAL veteran who felt that the present organisational structure in the two was not conducive to design development. HAL is geared mainly to production, virtually a backyard workshop for the Air Force. Moreover, HAL's different wings reported to different departments: design and research to the DRDO and production to Defence production. "I would put HAL's design and development wing under ADA", he argued."[78]

Since then the development of the LCA has remained controversial. The loss of Valluri and Mahindra was certainly significant and must have affected the quality of technical decision-making, particularly in relation to not only R&D but also technology transfer. Throughout

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77 Valluri [8 March 1982], p.14.

78 Singh [31 January 1986], p.79.

the mid- and late-1980s the LCA ran further and further into trouble as both the Government and industry prevaricated over the future direction of the project.

First and foremost it became unclear as to from which source the LCA engine would come and until the capabilities of the engine were decided upon, only limited progress could occur in other areas of design. It was hoped during the early part of the project to utilise the GTX engine under development at the Gas Turbine Research Establishment in Bangalore. The GTX is many, many years behind schedule and currently the main problems appear to be the production of an engine which can function very effectively in ambient temperatures of up to 45o, which is essential for any advanced aircraft deployed in Indian conditions. By 1984 only two out of the ten demonstrators had been produced and the requirement to demonstrate a thrust capability of 4,500kg and 6,600kg with afterburning had not materialised79. However, the scale of the task facing GTRE should not be underestimated and suggestions around 1987 that the GTX-35 would be ready by 1992 were extremely optimistic80.

Although the HAL Chairman, Air Marshall M.S.D. Wollen, stated in mid-1985 that India possessed the means to develop the LCA with one or more collaborative partners, despite the submission of design studies from British Aerospace, MBB, Dornier and Aérospatiale (some without charge), it became clear that this would not be the case[81]. In late-1985 the ADA met in Bangalore to review the design and development of

79 MILAVNEWS [April, 1984], p.6.

80 Salvy [December 1987], p.1611.

81 MILAVNEWS [August 1985], p.23.

the LCA and finalise the air staff requirement, following which HAL could proceed to the definition stage[82]. It was probably during this meeting that the ADA decided that, first, an interim measure had to be taken given the continuing delay of the GTX project and, second, that collaboration was inevitable.

In addition to the said European producers who were anxious to gain a toe-hold in the LCA project given the prevailing slump in the international combat-aircraft market elsewhere, the United States also appeared as a contender for collaboration, due entirely to Rajiv Gandhi's unsolicited willingness to do business with the US and initiate a considerable thaw in Indo-US relations. During a visit to the US in January 1986 an agreement was reached over the export of the General Electric F404 engine and the Prime Minister's visit was swiftly followed by a flood of American technicians to India. Thus, Grumman, Lockheed and Northrop added themselves to the list of contenders for collaboration. Meanwhile, new costings for the project emerged for the LCA project which took expenditure from an estimated Rs.600 crores ($492.6 million at current exchange rates) to new estimates of Rs.1,500 ($1.23 billion)[83;84].

By mid-1986 the LCA project had started to take shape following the issue of an air staff requirement. The ADA had apparently decided upon a single-engined, single-seat aircraft with a maximum take-off

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82 MILAVNEWS [October 1985], p.17

83 Henceforth costings for the LCA will be given in rupees only owing to severe devaluation during this period. In 1983 the exchange value of the rupee was approximately Rs.14:£1.00 but the value in recent years has dropped to Rs.25-27.

84 MILAVNEWS [January 1986] p.16.

weight of about 9,000 kg. Primarily designed as a battlefield air superiority, with a secondary close support capability, it was to have a top speed of Mach 2. A decision on the interim power plant was between the GE F404RM12 and the Rolls-Royce Turbo Union RB.199 Stage B, pending the successful development of the GTX. A prototype would fly by 1990 and the LCA would enter front-line service in the mid-1990s.

The political will on the part of the Government to pursue the programme prompted many inside and outside India to consider the likely success of the project. In particular consultants in the US started to evaluate the project and HAL's capability given the liklihood of American involvement and the results were far from positive. Dr Steven Bryen, Head of the Strategic Trade Directorate in the Pentagon considered the very basis of the project to be poorly conceived,

> "If India wants to go, suffer, spend a lot of money, in billions of dollars, that is your problem ... But, there is a question about the economics of developing some of these products ... [there] are no guarantees [it will work] ... You are talking about inventing a new cadre of people to do that work ... there is not enough rationale [for the LCA] ... as it is [ultimately] an economic issue ... because it starts to drag down where your talented people are going to spend their time, and I question those kinds of investments very closely."

More to the point, for an American analyst, he also questioned the wisdom of US involvement in a project such as the LCA,

> "The worse kind of project for us to get involved in is the one that fails, or, that gives opposition politicians a chance to stand up and say - you have been led up the garden path by the Americans."[85]

85 Karnad [24 February 1986].

Another respected American defence analyst, Jacques Gansler, considered the timing of the LCA project to be misconceived. In a similar interview he argued that India had embarked upon an extremely ambitious project but one which would only embody technology soon to be superseded by the coming generation. Thus, for example, the LCA is expected to incorporate a 'cranked arrow' configuration which calls for the leading edge of the wing to be angled with a resultant increase in lift for a given amount of power. However, the coming generation of fighter aircraft, notably the US Advanced Tactical Fighter, will incorporate vectored thrust technology which is much more advanced. So too will the composite materials used to build the ATF and its avionics be far in advance of those of the LCA. Gansler's recommendation was for India to delay the project to enable a limited acquisition of the emerging technologies.[86] However, Gansler did not discuss whether or not India could access such an advanced level of technology, afford the costs or cope with and exploit such advancements. In all three instances the answer would probably be negative.

Negotiations over defence technology transfer with the US proceeded apace and were extended to cover not only LCA technology but also radar technology, anti-tank weaponry, night vision equipment, main battle tank fire control and transmission systems, ammunition and advanced materials[87]. A high point was reached in January 1987 when US Secretary for Defense, Caspar Weinberger, visited India to promise publicly all the technical support the country required for the successful development of the LCA. At the same time, however,

86 Karnad [8 June 1986]. p.45.

87 Jane's Defence Weekly [8 November 1986], p 1089.

reports started to appear regarding future French involvement in the project. In October 1987 it was reported that Dassault-Breguet had signed an agreement worth $100 million with the Indian Government to supply 30 engineers to work in Bangalore under the auspices of the ADA. Effectively, therefore, France had won the design contract. Furthermore, it also became evident that France wished for an even greater input into the project by seeking to turn the Government's head in the direction of the SNECMA M88 MkII engine scheduled for use in the Rafale light combat aircraft.[88] In addition, during the same time-frame an ADA team visited the Rolls-Royce Military Engine Group facilities in Bristol to view the Turbo-Union RB199 engine[89].

Throughout 1987 interest in the LCA programme was overshadowed by the Boförs scandal and received much less media attention. However, by mid-1987 it seemed as though Saab had made a late bid to provide development assistance, probably on the grounds that the LCA would emerge as a close relation of the JAS39 light combat aircraft. Although Saab did not contribute a feasibility study in 198?, it had held previous talks with the Indian Government on co-operation as early as 1980-81[90]. During the same period it was announced that General Electric had in fact won the order for 10 F404 turbofans for the prototype phase of the project although this did not guarantee eventual incorporation at the production stage[91].

88 Jane's Defence Weekly [31 October 1987], p.676.

89 Defense & Foreign Affairs Weekly [27 October-2 Novemeber 1986], p.3.

90 MILAVNEWS [May 1987], p.15.

91 MILAVNEWS [June 1987], p.14.

Predictably enough, the project definition stage fell behind schedule by more than a year and serious consideration was given to the future of the programme. One reason for the delay was a failure to agree upon the optimum weight for the system which could in turn have been related to the delays encountered with the development of composite materials. Significantly, it was the Indian Air Force which was reported to be dissatisfied with progress and, furthermore, was actively considering abandoning the whole project in favour of joint development of the French Rafale. There would be several advantages for India in such a move. The GE F404 powers the Rafale prototype, which would not rule out an Indian version powered by the GTX-35, given that the engines are interchangeable. The multimode radar under development for the LCA could also be used in the Rafale. Finally, given the likelihood that the cost of the LCA would certainly spiral out of control with uncertain end results and timing, investment in the French system would be much safer and almost certainly cheaper[92]. Soon after it was reported that Dassault had succeeded in a bid to strike a 'company-company' agreement with HAL over the marketing of the LCA. In effect, Dassault had managed to introduce the LCA into its product spectrum alongside other systems in production and proposed; the Mirage 2000 and 4000, the Rafale and the Franco-German Alpha jet.[93] How much this represents the thin end of the wedge designed to assimilate finally the whole project remains to be seen.

During the same period a Letter of Offer and Acceptance was signed between the US Air Force and the Indian Defence Research and

92 De Briganti [29 August 1988].

93 Jane's Defence Weekly [17 September 1988].

Development Organisation which allowed Indian technicians access to the four Air Force Wright Aeronautical Laboratories which opened the way for collaboration and US industry participation in the project[94]. Also, during the same period, the Soviet Union started to display an interest in the ill-fated programme by offering New Delhi participation in a new single-engined combat aircraft, similar in capability to the US F-16, should the price tag for the LCA present further problems.

At the end of 1988 another peculiar twist was added to the LCA saga. In a bid to drive a wedge between New Delhi and both Washington and Paris, the Soviet Union offered to improve radically the MiG-21, the aircraft the LCA is destined to replace. On offer for the MiG-21 is the MiG-29 engine, new wings and a modern avionics system. Since MiG-21 production facilities already exist in India the retrofitting could be done at a comparatively low cost. If accepted India could slow down the pace of LCA development and therefore distribute the escalating costs over a wider period of time or it could cancel what is rapidly becoming the biggest white elephant in the history of Indian defence production.[95] Furthermore, during a period when the country's foreign exchange reserves are depleting rapidly such an offer, if accepted, could also slow the import of other sophisticated aircraft and even provide India with a novel source of exports during a period when many countries are finding it extremely difficult to afford state-of-the-art military technology.

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94 MILAVNEWS [October 1988], p.19.

95 Sharma [20 December 1988].

The Indian Light Combat Aircraft is beginning to appear in a similar light to other major aeronautic projects attempted by India - chaotic, subject to flux, cost overruns and time delays. Above all it is possible that the Indian Air Force will eventually do what it appears to have done on numerous other occasions and effectively obstruct attempts at indigenisation in an attempt to ensure that foreign rather than indigenous systems prevail.

In the current climate the long- and short-term prospects for the Indian aeronautics industry look bleak. Fettered by bureaucratic infighting and rendered less capable than it really is by the unrealistic demands of the Air Force, deprived of an input into the decision making process and lacking the necessary political patronage, HAL is unlikely to develop its technological capabilities. In this milieu there is no opportunity to close the gap between present levels of capability and the increasing rate of technological change in the defence industries of the West. Given the way in which the technological needs for defence are defined, this is a prerequisite. The LCA project did to a certain extent reflect an understanding on the part of government that the opportunities for India to create a viable and credible aeronautic production capability based upon modern technologies were fast diminishing. If the Government had not proceeded with the LCA programme, the long term fortunes of HAL would have looked bleak indeed. However, sound decision-making, effective management and co-ordinated support were equally important and in this direction there are many questions. Why were two of the most effective members of the ADA allowed to resign without attempts at reconciliation, particularly given the peculiarities of the industry and the need for experienced

leadership? Why were so many foreign technicians and consultants allowed onto the programme in such a ad hoc manner? No fewer than six countries made offers to India during the mid-1980s which led to confusion and prevarication and must surely have hindered progress, resolve and morale. Why was the IAF allowed to court Dassault for the Rafale given the apparent resolve on the part of government to develop as much of an indigenous capacity as possible?

Equally relevant is the question as to why HAL was allowed to reach such a parlous state in the late-1970s? During a period of rapid technological change why did government allow the industry to exist without projects and without significant research and development? Therein lies the basis of the problems experienced over the course of the LCA programme. Under any circumstances it is both difficult and expensive for a country such as India to match the rate of technological change which obtains in the West, or the Soviet Union. Any attempt, therefore, to leap one generation at least by moving from the HF-24 to the LCA when the industry has languished and many of the best and the brightest have left is bound to be costly, time consuming and technically complex. Without effective management or government discipline over the role and input of all the relevant institutions, the type of failures and setbacks witnessed in recent years are probably inevitable.

CHAPTER EIGHT

DEFENCE DECISION MAKING IN INDIA: THE POLICY MAKING PROCESS

8.1 The Making of Conventional Defence Policy

The decision making process is, in essence, the course which any decision must run to become official policy. Before reaching this definitive stage, any potential policy change should be considered by all the relevant organisations to provide elected decision makers with sufficient information, data and advice to enable an informed and appropriate decision to be taken.

Unlike many other Third World countries, the process of decision making in the Indian defence sector is reasonably well-defined. Frequent descriptions appear in both official and unofficial published sources. Most appraisals of the process in India take one of two approaches to the issue. The first, adopted primarily by defence commentators and the Indian Government itself, places emphasis upon both the numerous stages in the process and the plethora of institutions which collectively shape policy. The intentions behind this exercise are two-fold. First, when published in Western technical journals, the purpose is to provide information for those outside the system who may have a professional interest in how the system works[1]. Both foreign and national bureaucratic and commercial interests will often need to know exactly how the decision making process functions, where the primary actors are located and how to understand fully a system through which they might have to

1 See, for example, Singh [1982].

work in order to secure either a defence contract, or for more general commercial intelligence purposes. Second, it is a means of reiterating the constitutional and democratic nature of a decision making process which is rare amongst developing countries and an aspect of governance of which India is quite correctly very proud.

The second approach is that of (comparative) political scientists who seek to identify the role of the various decision makers and the organisations they represent. The value of this type of analysis comes from the stress upon the differing roles and perceptions of the individuals and institutions which formulate policy. However, this approach has concentrated primarily upon the workings of bureaucracies in the West, particularly the United States. A central purpose of these efforts in an Indian context is to underscore the country's continuing commitment to democracy and the role the legislature fulfils as an essential check and balance to the role of bureaucracy, which includes the armed forces. However, informative though these efforts may be, there is an underlying tendency to accept that, because these organisations exist, they are more or less key determinants in the policy making process and function in practice as they should, according to the constitution. In other words, it is assumed that, by virtue of constitutional arrangements, the complex and sophisticated process of decision making is essentially democratic. This does not take account of a key factor thus far alluded to but not yet fully described, namely the way in which important decisions are made in relation to the distribution of information and knowledge. If one or more of the key actors or institutions misunderstands, does not have access to the information required, or is uninterested in the information available to

influence the policy making process, the ability to fulfil constitutional obligations will decline accordingly.

The responsibility for conventional defence in India, as established by constitutional fiat, is vested in the Union Government which is responsible for all aspects of defence and national security. This includes not only the prosecution of war, but also war preparedness and defence production.

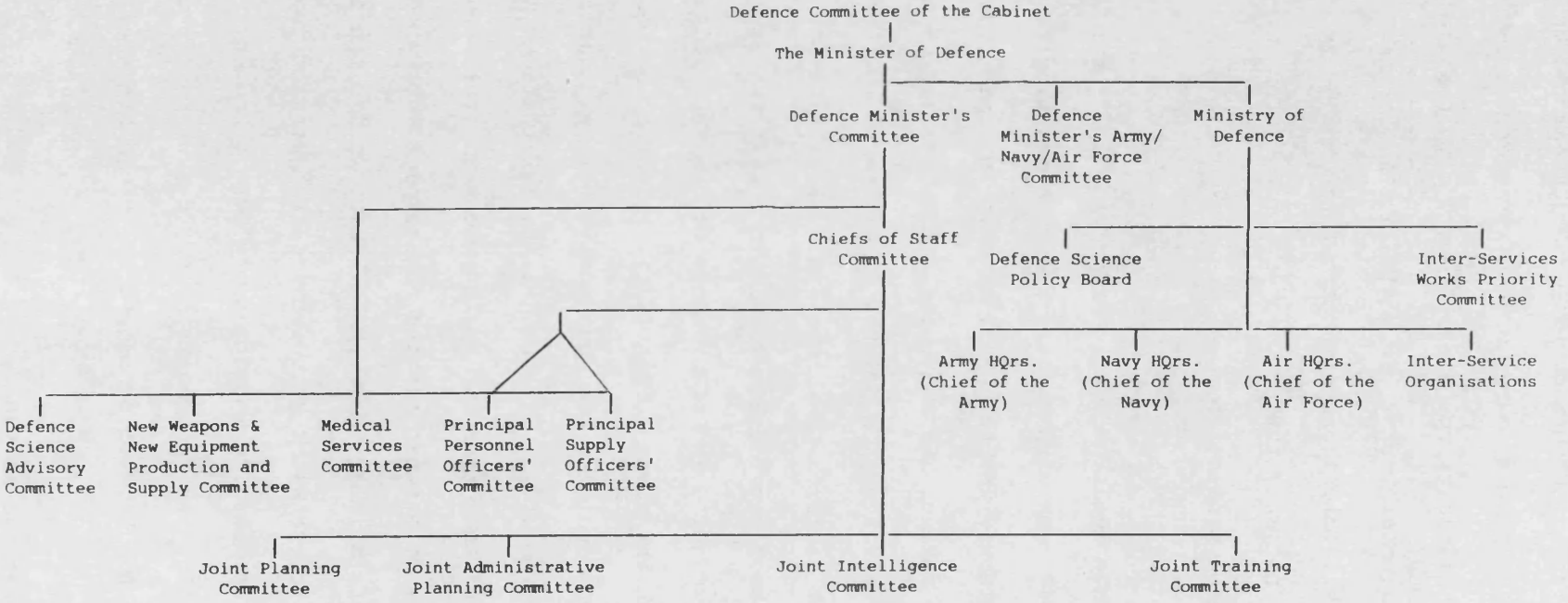
The defence decision making process in India has changed considerably since 1947. Originally, the decision making structure was designed by Lord Ismay, who had previous experience in British defence decision making. He recommended the creation of a three cornered system comprising the Defence Committee of the Cabinet (DCC), the Defence Minister's Committee (DMC) and the Chiefs of Staff Committee (CSC) (see Figure 8.1). The logic behind this system was to provide equally weighted inputs from the Government (DCC), the bureaucracy (DMC) and the armed forces (CSC). These committees were assisted by smaller and more specialised committees, such as the Defence Science Advisory Committee. The DMC was by far the most important body and members of the other two key committees - the service chiefs, the Secretary of Defence and the Financial Advisor to the MoD - were in attendance at meetings.[2] However, over time the formal decision making process was short-circuited and adhered to less and less. During the Nehru period decisions were taken on an ad hoc basis. Effectively, the DMC was bypassed, due primarily to the close working relationship between Menon and the Prime Minister (see Chapter Four)[3].

2 Venkateswaran [1967], pp.89-96.

3 Thomas [1986], p.120.

FIGURE 8.1

THE DECISION MAKING PROCESS BEFORE 1966



Only the more important of the committees have been included in this chart.

Source: Venkateswaren [1967]

During the 1962 war it became evident that the established formal peacetime decision making process was inadequate for swift decision taking and wartime planning. This led to the creation of a series of emergency committees which met on a daily basis; the DMC became the Emergency Committee of the Cabinet (ECC) and the daily meetings were attended by several ministers (its composition changed over time). After the war it was decided that the daily meetings between the Defence Minister and the service chiefs should continue.

The starting point for defence decision making involves an appropriate definition and assessment of the actual and potential threat to India's security environment. This includes not only the country's borders and coastlines but also, and more recently, its airspace, island possessions and the country's off-shore facilities[4]. Internal security issues will also be relevant in this context, particularly in relation to Sikh extremism in the Punjab and, to a lesser extent, terrorist activity in Tamil Nadu, for example. Since 1962 the starting points for preliminary evaluation have been the Policy Planning and Review Committee (PPRC) and the Joint Intelligence Committee (JIC) (See Figure 8.2). Set up in 1966, the PPRC is primarily a Ministry of External Affairs (MEA) committee, although a defence secretary was invited to join in 1969. The committee's remit is to examine India's foreign policy in relation to the international environment, giving due regard to politico-militaryand politico-economic considerations[5]. Prior to 1965, the JIC comprised the Joint Secretary of the MEA as Chairman,

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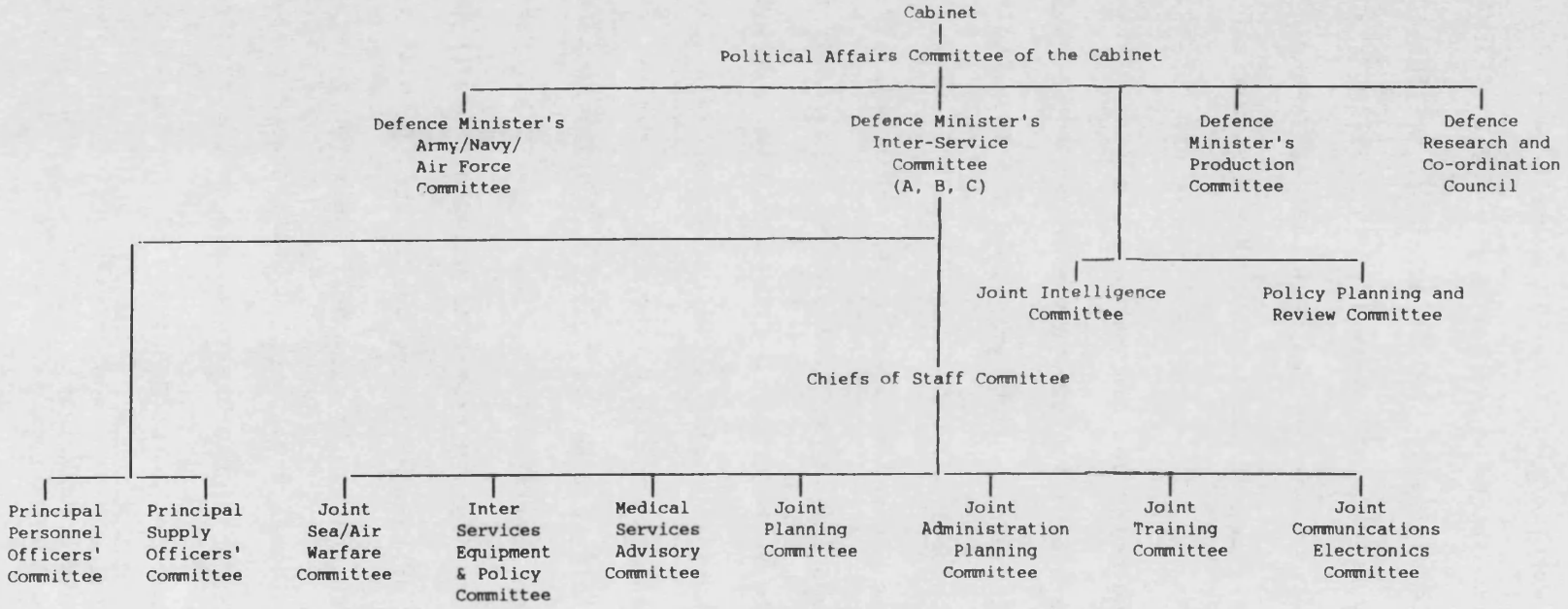
4 One of the major lessons which Indian defence planners drew from the Falklands/Malvinas conflict was the importance of protecting island possessions.

5 Chari [1980], p.143.

FIGURE 8.2

THE DEFENCE DECISION MAKING PROCESS SINCE 1966



Source: Venkateswaren [1967]

representatives of the Ministry of Defence (MoD) and Home Affairs and the Directors of Intelligence from the three services and was a subsidiary body of the Chiefs of Staff Committee. In 1965, following the dismal performance of Indian intelligence in 1962, the JIC was reconstituted and brought into the Cabinet Secretariat where an Additional Secretary is now the chair[6]. The Committee meets as often as necessary, even daily during times of crisis, and produces for the Cabinet swift assessments of changing situations and likely developments. Up until 1971, the JIC reported directly to the Defence Committee of the Cabinet (DCC), where all the major decisions on defence were taken. In 1971, the Political Affairs Committee of the Cabinet (PACC) was constituted to take quick political decisions. Since that time, it has evolved into the major defence decision making committee within the Cabinet, whereas the DCC has fallen by the wayside. This limits the Government's ability to consider long term defence planning and there is some pressure from Parliament to see the Committee brought back[7]. The PACC is chaired by the Prime Minister and its usual members are the Ministers for Defence, External Affairs, Home and Finance. It is, therefore, primarily the responsibility of the PACC to define defence policy in response to the assessments it receives from the JIC and the PPRC. Thereafter, the directives of the PACC must be both implemented and constitutionally legitimised - this is the point at which security problems are translated into defence plans.

The implementation of defence policy is undertaken by the MoD which is overseen by the Defence Minister. The important Committee here is the Defence Minister's Inter-Service Committee which deals with plans

6 Venkateswaran [1967], pp.363-364.

7 The Hindu [9 April 1986].

and papers on defence subjects which are not serious enough to be refered to the PACC. The Minister is assisted by junior colleagues who run the four major departments within the Ministry, namely the Departments of Defence, Defence Production, Supplies and Research and Development. The Defence Minister is served by two main committees, the Defence Minister's Committee and the Defence Minister's (Production and Supply) Committee. This latter body regulates the defence production effort and co-ordination with civilian industry. The Defence Research and Co-ordination Council directs and co-ordinates scientific research in relation to defence. A further division of labour occurs at the third echelon of the decision making process involving bodies such as the Defence Electronics Committee and the Principal Supply Officers Committee.[8]

Between the PACC and the bodies which assess external threat, there is the Chiefs of Staff Committee (CSC). The CSC is a three person committee comprising the service chiefs and it is chaired by the member with the longest tenure. The CSC deals with inter-service issues. Via the morning meetings with the Defence Minister, through the Defence Minister's Inter-Service Committee, the service chiefs are able to discuss any issue pertaining to defence which allows the military to project problems to government directly. Depending upon the decision taken, the Defence Minister will delegate his junior colleagues to ensure that the decision is implemented. Departmental committees will then take up the process of implementation and will co-ordinate with all the necessary groups.

Each year the Ministry of Defence and the armed forces are scrutinised by the legislature, upon whom the responsibility rests

8 Chari [1980], p.133.

regarding the future scale of defence operations and level of military expenditure. In principle, the legislature can demand that defence allocations are either raised or lowered, for example. Over the course of the annual debate in Parliament on the defence budget, almost two days in April are given over to the discussion of defence and war preparedness. The documents placed before Parliament by the MoD in the form of the Defence Estimates and the Annual Report together provide a relatively exhaustive overview of India's defence policy and posture, certainly much more than exists in other Third World countries. One noticeable omission amongst the information provided by the Government, however, is significant detail on where the Government stands at any given time on the nuclear weapon option.

In recent years there has been a strong lobby from within the armed forces to create a Chief of Defence Staff (CDS), as practised by the British for four decades from the turn of the century through until independence[9]. It is currently argued that the armed forces are insufficiently integrated into the higher echelons of the decision making process. The purpose of such a post would be to bring a military person much closer to the final centre of decision making. The present arrangment, it has been argued, lacks an integrated approach to service requirements and involves the triplication of work because the same potential decision is examined by the military headquarters, the MoD and the latter's Financial Adviser. However, the potential role of the CDS differs considerably and ranges from an adviser to the Defence Minister, inter-service mission co-ordination, a link person between the Chiefs of Staff and the Defence Minister and a primary role in wartime. Those in support of establishing such a post point to India's growing military posture and the arcane

9 Venkataswaran [25 May 1984].

defence decision making process, Britain's success in the Falklands/Malvinas conflict due in part to joint staff planning, better management practices and the elimination of inter-service rivalry as examples of the potential benefits.[10]

The CDS debate ebbs and flows and will no doubt emerge again, probably after the next general election. However, it is doubtful that any Indian Government would accede to the creation of a CDS post, even though opposition parties have frequently raised the issue during the annual defence debate. Yet there is no suggestion that the opposition is totally in favour of the post, and it may be the case that the CDS provides a debating point without much substance and may even be a filibuster.

Even if the CDS post made good bureaucratic and managerial sense, the Government would still be likely to refuse the change. Generally, those who argue against the post consider it worthless to add an additional decision making echelon in an already cumbersome decision making process. Furthermore, the creation of a post with such close access to the Prime Minister and Minister of Defence could diminish significantly the role of the MoD and effectively shortcircuit rather than streamline the decision making process. Nor has the concentration of such power and prestige in one military officer been overlooked, particularly given the history of the Pakistan military's involvement in politics. In addition to the disputes over bureaucratic turf and management efficiency, another reason for the antagonism on the part of successive Governments may be the possibility that a CDS could reduce or complicate significantly the rent seeking activities of the major decision makers. Alternatively,

10 Elkin and Ritezel [1984], p.1075, 1077, 1076-1079.

the cake would have to divided into more sections. It is, therefore, somewhat unlikely that the system of defence decision making will change dramatically in the future.

One potential major change could be if the country opted to take the nuclear option. The changes here would be two-fold. First, the decision to begin the production of nuclear weapons would require a different set of institutional actors. Although India demonstrated its ability to explode a nuclear 'device' in 1974, the transition from test to capability is a complicated one. Before developing a nuclear force capable of deterrence, the Government must be sure that the required amounts of unsafeguarded fissile materials are available. In addition, it must be equally clear that the missiles which India currently has under development and/or the nuclear capable aircraft, such as the Mirage 2000 and the Jaguar, can deliver nuclear weapons of Indian size and design. Thus, a new set of decision makers drawn from the nuclear energy and space research establishments would of necessity be drawn into the inner decision making circles. So too might the MEA be more prominent, given the need to assess the international reaction which would inevitably accompany the decision to go nuclear with regard to both relations with individual countries (particularly the Soviet Union which keeps a very close watch on India's nuclear aspirations due to its considerable commitment to nuclear non-proliferation as a member of the London Club) and the potential reaction of the United Nations. It might, for example, be more worthwhile politically for the Government to maintain a policy of ambiguity rather than overt deterrence[11].

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11 I have discussed this aspect with regard to the nuclear arms race in South Asia in Smith, C. [1987].

Second, the decisions to produce, deploy and use nuclear weapons are essentially political choices. Although the armed forces would be consulted, it would be in a technical capacity alone on, for example, how to interface conventional and nuclear capabilities, targeting and delivery systems. Nevertheless, the key actors would be the members of the PACC, or perhaps a more select body which does not as yet exist, and the armed forces would have a much smaller input than in the conventional sphere. It is, perhaps, for this reason that the military is less enthusiastic about the nuclear option than might be expected. So too will the service chiefs have understood the enormous costs entailed in the development of a nuclear strike force. This would amount to a considerable loss of decision making capacity for the armed forces in relation to the disbursement of allocations.

8.2 Decision Making in Practice

The annual defence debate in Parliament is rarely if ever an indication that the watchdog and determining role of the legislature is being either adequately undertaken or exploited. Defence debates have been described as generating 'heat but never light'[12]. Recently, this criticism may be considered a relatively mild one; contemporary parliamentary debates tend to be extremely perfunctory and rarely illuminating or directive. Moreover, they are particularly badly attended,

> "Incredible though it may seem but the sad, indeed shameful truth is that there were three long stretches during the three day discussion on defence - which apart from being a matter of life and death costs the country close to Rs.6000 crores - when there was not even a

12 Chari [1980], p.138.

> quorum in the House. At times the number of those present did not exceed 20".[13]

There are two explanations for this lackadaisical approach on the part of the legislature. The first relates to the lack of information made available to the upper and lower houses. In relation to other Third World countries and the Soviet bloc, the information made available in India is substantial. For example, the MoD frequently releases press releases when major new defence decisions are taken, such as over military exercises or the purchase of a new defence system. Yet, it is still insufficient for an informed debate. The Defence Estimates, for example, which form the basis for the annual defence debate in the Lok Sabha, are inadequate. Procurement costs are put under one budget head, euphemistically entitled 'stores'. There is no indication as to how much foreign exchange will be utilised for defence in any given year, so it is difficult to estimate the full impact of defence expenditure upon the Indian economy in a given time frame. Crude estimates could be made from evaluating the sources available outside India, such as commercial intelligence reports and technical journals, but this is a time consuming and unsatisfactory exercise - the price paid for a weapons system may amount to less than 50% of the total costs when training, technical advice, spare parts and maintenance are included[14]. When questions are tabled in Parliament, which is not often, the Government frequently uses the excuse of 'national security' to avoid furnishing detailed information, even though on many occasions the information is publicly available outside and

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13 Malhotra [7 April 1983].

14 Brzoska [1988].

sometimes inside India[15]. Although there is a public and media defence debate, officials rarely intervene on anything more than a superficial level. Aided and abetted by nearly four decades of sophisticated propoganda against Pakistan, officials often retreat behind a smokescreen of 'gathering war clouds', the 'imminent threat of war', 'border movements' and the 'work of foreign hands'. Typically, the media react in a very passive way and tend not to move beyond the emotion generated by either Pakistan or the United States, or both; the constant references to the appearance of the USS Enterprise in the Bay of Bengal in 1971 is a case in point. Consequently, parliamentarians are neither encouraged or cajoled by the press to debate key defence issues and military expenditure continues to be the exceptional holy cow.

The second explanation for the lack of Parliamentary clout on defence issues is the continuing hold of the Congress(I) party on Indian political affairs. With the exception of a two year period (1977-1980), either Congress or Congress(I) have held political power in India since 1947. This has had the effect of stifling debate and bestowing upon the Government a relatively free hand in the conduct of defence and other matters; internal security, space and nuclear power, for example. Thus, together with the lack of parliamentary interest in defence, a situation has arisen whereby the Government has little compunction in pursuing policies without the need for legitimation, whatever the cost and impact.

In both the past and present, Nehru, Indira Gandhi and Rajiv Gandhi have taken up the defence portfolio which further stifles debate; few

15 In fact, some of the more zealous Indian MPs have claimed that state secrets relating to national security should not be reproduced in the Jane's reference series.

Congress MPs would wish to challenge directly their party leader on such a sensitive issue. In addition, the continuing success of the Congress(I) party has severely damaged the fortunes of the political opposition parties. There is no nationally viable, single opposition party in India and the best that can be expected is a coalition of regional and factional interests. Even the Desai government of 1978-80 was a unsatisfactory coalition galvanised by a mutual distaste for Indira Gandhi's style of government. Consequently, there are few politicians outside the ruling party with experience of office. The non-existence of a strong opposition party has prevented the formation of a shadow cabinet[16], which would of necessity include a consistent critique of Government policy in the form of an opposition defence spokesperson(s); the enforced learning process could only be of benefit to the prosecution of an alternative perspective, which would in turn create a defence debate where none exists at present. However, it need not be the case that all opposition parties would be in favour of restraint. In some cases, opposition parties consider that the Government is lagging behind on defence preparedness. Recently, the Bharatiya Janata Party (BJP), a leading right-wing opposition party, criticised the Prime Minister for an inappropriate response to the allegations regarding Pakistani developments in the nuclear field. Furthermore, the party adopted a resolution calling for the development and stockpiling of nuclear weapons by India[17].

It can be argued, therefore, that although a democratic system exists in India, it works imperfectly in the realm of defence. Primarily through the witholding of information, which is complemented by an advanced state of apathy on the part of politicians, the ability and

16 Chari [1980], p.140.

17 Journal of Defence and Diplomacy [October 1985].

interest of Parliament to direct and monitor developments and progress in defence policy is severely limited. In principle, the PACC should formulate policy which should then be widely debated in Parliament and beyond, assuming that the security issues at stake do not require an instant response, such as the threat of invasion or war. Information should be made more fully available and policy decisions defended at the formal committee level and in the debating chamber, as befits a democratic system. In practice, however, this appears not to be the case. Although the structures exist they are not utilised.

Equally important in the analysis of the decision making process is the degree to which the armed forces exercise influence upon the element of choice open to the bureaucracy and legislature. The earlier analysis of the definitive period between 1947 and 1962 highlighted the inability of any individual or institution apart from the armed forces to define with authority the technological parameters of defence policy. Since the 1962 war, the decision making process has changed significantly. One result has been that the Cabinet is now better informed than hitherto and is able to make more informed judgements pertaining to procurement. Also, the MoD now has more expertise than in the Nehru era and is itself more capable of giving advice.

However, the ability to counter-balance the institutional pressure of the armed forces is still not in evidence. Nowhere in India is there a recognised body capable of understanding fully the demands of the armed forces. The Defence Minister with a tenure of limited length, which is dependent in any case upon wider political circumstances, is

hard pressed to come to terms fully with the complex world of defence, subjected as it is to a rapid rate of technological change.

Much the same is true of the Government sponsored Institute for Defence Studies and Analysis, the official defence think-tank. Certainly, the existence of this institution has fostered a more sophisticated public debate where before there was virtually none. However, on taking up the post the director becomes a civil servant (the present incumbent is a retired IAF officer), there are often retired military personnel on the staff and, consequently, the institute is not particularly well recognised either inside or outside India as an impartial source. In addition, its intellectual standards are known to veer erratically from the excellent to the mundane. Whilst criticism of defence policy from within the IDSA is certainly tolerated, nevertheless, the institute has failed to build for itself a reputation which reflects the required degree of academic and political credibility that is necessary for a body such as this to impact upon the decision making rather than the opinion shaping process. Instead, IDSA is often seen as little more than a means of articulating Government defence policy both at home and abroad.

Another potential means of balance is to be found in the watchdog Parliamentary Committees. Based upon the annual report and recommendations of the Comptroller and Auditor General, various areas of public policy implementation, including defence, are rigorously examined. The Public Accounts Committee (PAC) examines autonomous defence public sector enterprises and the Estimates Committee scrutinises the efficiency of organisational aspects. The published reports of these committees are often revealing. Nevertheless, all

the PAC reports and most of the Estimates Committee reports are ex post facto, although the Estimates Committee is able to consider departmental estimates before they are presented to Parliament[18]. These are, therefore, committees without teeth. Considering the serious nature of some of the allegations and the supporting evidence gathered by the watchdog committees, it is remarkable how little effect these hearings have, in stark contrast to the very different model of the Congressional Hearings in the US, for example.

Equally, the expertise available to the legislature is not insufficiently impartial. Of particular importance is the fact that the JIC acts with a supporting staff drawn entirely from the military. The other body responsible for the assessment of threat, the PPRC, is serviced by the policy planning Division of the MEA which does not have a staff with a working knowledge of security affairs.[19] Ergo, the assessments pertaining to threat are heavily, if not exclusively, influenced by the armed forces.

When a pending problem requiring a decision has reached cabinet level, the PACC will request advice from both the service chiefs and the MoD. The service chiefs are in attendance at PACC meetings to provide advice if required. In addition, they are able to use the 'morning meetings' to communicate with the Cabinet via the Defence Minister. Thus, although the military are not appointed to posts within the MoD, they do interject at several points in the policy making process at the highest possible level.

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18 Chari [1980], p.139.

19 Chari [1980], p.143.

Nevertheless, in a relatively mature democracy such as exists in India, the MoD should have reached a much higher level of competence and proficiency since the 1950s when the power of decision making rested with the service chiefs. Yet this does not appear to have happenened. Even though after 1962 the initiative for policy decisions was placed firmly with the MoD, the learning process remained insufficient, particularly on items requiring high expenditure. According to India's foremost defence bureaucracy analyst,

> "Proposals really connected with fighting efficiency or build-up of defence potential get through amazingly quickly irrespective of cost. The cases that drag on are those with amorphous fighting value - like creating additional posts of military attachés abroad, upgradation of ranks of individual posts for officers, construction of swimming pools and other amenities, etc. In fact Service HQs often buttress their proposals with stock phrases like 'operational preparedness' and 'maintenance of morale' and confuse the already baffled defence officials.
>
> Recruitment, training, preparation of operational plans, location of troops, etc., have been entirely with the Service HQs. It would thus require a lot of imagination to suggest that the Defence Ministry functions as a super-military headquarters. Indeed Defence Ministry officials have no competence to be super-military staff, nor are they required to be so.
>
> ... the Service HQs seem to have consciously or otherwise a vested interest in keeping Defence Ministry officials in ignorance."[20]

In this overview of defence policy making, emphasis has been placed upon the ability of the military to influence the policy making process. The need to solicit the views and advice of the military in the defence of the state cannot be disputed. However, one observation must follow if the armed forces are the primary force in shaping decisions; the policy making process is at variance with the articles of the constitution, which place the main power of decision

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20 Venkateswaran [25 May 1984].

making in the hands of Parliament. In the absence of non-military expertise to counter-balance the views of the military, the legislature is severely disadvantaged. This brings into question the claims of many commentators regarding the democratic nature of the defence decision making process in India. However, it should be reiterated that this is not a problem unique to India. Nor can it be argued that this anomaly has occurred as a result of subversive activity on the part of the military, bureaucracy or Parliament. It is more the product of a failure, at a very early stage, to understand the degree to which the insufficient provision of information in a complex and sensitive area of decision making can seriously disadvantage the non-military decision makers.

Despite the evidence of a sophisticated machinery designed to facilitate a constitutional and rational decision making process in India, the system does not work well in the realm of defence. In one sense this is a universal problem - democracy at work is always a complex and dynamic mix of power, opportunism, bureaucratic politics and pressure. In the absence of an informed and open process politicians are prone to rely too much upon power and pressure and the merits of the system in principle become worthless. In a highly complex and sensitive area such as defence, with decisions involving large financial outlays with a commensurably long process of implementation over lengthy periods of time, policy deviations are probably inevitable. In the case of India and other countries whose policy processes have been carefully studied, there is a universal problem of a relative lack of accountability and orthodoxy. However, it is necessary to differentiate sharply between the inherent weakness of the system and its subversion.

The weakness of the policy process in the case of India is the inability of the legislature to counter the bargaining position of the armed forces and to a lesser extent the MoD. Whilst checks and balances exist in principle, in practice they are virtually meaningless. For example, a Ministry of Finance officer has a desk in the MoD to ensure than defence allocations are requested and disbursed in such a way as to prevent harm to other areas of the Indian economy. However, there is no evidence to suggest that this post, which effectively gives the Ministry of Finance the power of veto over the Ministry of Defence when it comes to issues involving expenditure, is used in the way it could and should have been in recent years. There have been very few occaisions when the equipment required by the armed forces has not been forthcoming because of high costs.

Although there are evident problems in the structure of policy making which have never been fully addressed by the Indian Government, other aspects of Indian politics are also relevant. Towards the end of her life, Indira Gandhi came under increasing criticism for her autocratic style of government and her propensity to develop a presidential style of government. From the time of her re-election in 1980, the overall style of decision making changed dramatically, particularly in relation to defence. After a period of low activity in defence procurement, Mrs Gandhi's return to power was swiftly followed by an open season for procurement and defence modernisation. During the four year period, from 1980 until her death in October 1984, the basis of decision making was taken further away from the legislature. A small coterie of advisers drawn from the Prime Minister's Secretariat and the so-called 'Kitchen Cabinet' (which took its name from the propensity of its members - the Defence,

Finance and External Affairs Ministers and the Prime Minister to conduct their business at the Prime Minister's residence) became responsible for the framing of important policy and, to a lesser extent, the monitoring of policy implementation[21]. In the months before her death Indira Gandhi brought her son and heir apparent and his trusted advisers increasingly into the policy process. When Rajiv Gandhi took power the style of decision making changed very little although there were enormous changes in the personnel involved and the distribution of power. Rajiv's first term of office has been confused with regard to decision making. Initially, he rejected most of the major advisers utilised by his Mother, people such as G. Parthasarathy and R.K. Dhawan. Instead, Rajiv surrounded himself with younger people who lacked political experience but nevertheless imbued the new Government with a new image based upon technological development, 'clean' government, efficiency and dynamism. However, the dynamic atmosphere and the loyalty of the new advisers did not last long. Racked by incessant infighting and frequent threats to the authority of the Prime Minister, Rajiv was forced into frequent cabinet reshuffles to prevent the establishment of independent power bases and, eventually, sacked several of his erstwhile closest and most trusted advisers, such as his cousin, Arun Nehru. For several months Gandhi operated with an apparently ineffectual team which was unable to raise the Government's performance. As the time for a general election drew nearer (elections must be held before December 1989), Rajiv brought back many of his Mother's trusted advisers.

In this way the defence policy process in India has reverted back to what it was during the Nehru period. Major decisions which date from with the modernisation programme in 1980 were only partially debated

21 Sundar Rajan [January 1984], pp.48-54.

within an increasingly apathetic legislature - Congress(I) MPs became hamstrung by the burgeoning employment of patronage. Rather than address themselves directly to the erosion of democracy, many chose instead to exploit the situation. Corruption and the abuse of power increased exponentially as Congress(I) MPs used their positions to amass the maximum wealth and power in the limited time available before the opportunities faded.

The prevailing style of decision making opened up a direct line of communication between the service chiefs and the Prime Minister via the Cabinet Secretariat and the 'Kitchen Cabinet'. The domestic political crises which punctuated Indira Gandhi's last few years of power were hidden behind the thick smokescreen of a continuing security crisis. For the armed forces it was a halcyon period during which the import of advanced military technology proceeded apace with unprecedented speed. In addition, the armed forces benefited from the increasing desire for India to become not just an undisputed regional power but also a global military power. Underpinned by a belief that India was not a weak state but one that had yet to pull the correct levers to realise its vast potential wealth and power, it set out to challenge the status quo of the non-proliferation regime, superpower influence in the Indian Ocean and the outright control of the sub-continent itself.

Within the legislature, the concept of India becoming a major regional power which required exponential rises in defence expenditure was far from unpopular. First, there is a widespread desire on the part of Indian élites for their country to be taken more seriously within the international system. Since 1980, India's improved economic position, the evident need to modernise at least

some sections of the armed forces and the favourable terms to be found on the international arms market, provided an opportunity which many had been waiting for since the 1971 war with Pakistan. Thus, a Ministry of External Affairs official recently offered a Western diplomat the rather extended argument that one reason for the further development of a blue water navy lay in the present and future turmoil within Southern Africa[22]. K. Subrahmanyam, the recognised spokesman for the hawkish element of the Indian élite, has argued that India should have a seat on the United Nations' Security Council,

> "One out of every six people in the world is Indian. In any democratic structure, India would have an effective say. But you in the West devised a world order in which the second largest country isn't even a permanent member of the Security Council. That's a big omission."[23]

A retired Indian Navy admiral has been even more blunt,

> "The world has learned to live with US power, Soviet power, even Chinese power, and it will have to learn to live with Indian power."[24]

Second, the defence build-up is also popular amongst the Indian middle classes, albeit at a level once removed from the concerns of the élites. Within India, the middle class, which numbers anything from 100 to 200 million, and the private sector, have provided the economic dynamism which was evident in the early-1980s. On the one hand, they provide a form of national cement as they have a considerable vested interest in the Government keeping the country together and preserving a single market. However, the liberalisation programmes which gave India dynamism in the 1980s also begot regional disparities and increasing class differences[25]. The middle classes

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22 Munro [3 April 1989], p.12.

23 Munro [3 April 1989], pp.13-14.

24 Munro [3 April 1989], p.13.

25 Housego [28 April 1989].

look to the ruling Congress(I) to maintain this cohesion. Increasing the strength of the Centre can achieve these ends to a degree but national unity, however cosmetic, cannot be achieved without a viable defence sector capable of providing external presence and internal security.

Nevertheless, it is somewhat curious that the Public Accounts Committee of the Cabinet should permit the profligate expansionism of the 1980s. However much the process is in accord with the Government's view of the need to acquire great power status and the respect of other major powers, particularly the United States, the political cost of economic failure brought on by an excessive expansion of the defence sector and depleted foreign exchange reserves could only be borne by the incumbent ruling party. To this writer's knowledge, few requests from the armed forces have been turned down in recent years, with the possible exception of the Tornado Multi Role Combat Aircraft. This begs the question as to what in addition the PACC members have to gain. Conceivably, the task of acquiring enhanced international prestige could well have been achieved more economically. Or, put another way, how rational is it for a country to aspire to major power status and at the same time pay relatively little attention until recently to the fortunes and performance of the domestic defence industry? Why does India import when it could produce indigenously? Why are such lavish procurement programmes pushed through without reservations when the end, major power status, could be achieved at less political cost?

One explanation for the total rather than the measured acquiescence of the PACC may lie in the increasing evidence that most major defence deals between the arms exporters from the West and Third

World countries, including India, are acconpanied by sizeable commissions paid to the decision takers. The costs incurred are then added to the total amounts paid for the defence equipment and may inflate prices by up to 50 percent[26].

Over the past few years the allegations of corrupt practice in defence deals involving India has been commonplace. Mrs Gandhi was alleged to have secured several million pounds in commission payments over the Jaguar DPSA deal[27]. In 1985 it was suggested that the Swedish firm Boförs had paid tens of millions of dollars in commissions to secure an order for 155mm field guns worth over $1.3 billion, a scandal which rocked the Rajiv Gandhi Government. The influential Hindujah family was alleged to have received $500 million on behalf of unknown memebers of the Congress(I) party responsible for taking the relevant decisions[28].

The motivating forces for corruption involving high ranking politicians are several. Increasingly in India, the benefits for the ruling party are personal and stem from the need for foreign exchange reserves which are held outside the country to cover luxery consumption, foreign health care, education and travel. However, a recognisable political function is fulfilled by the ruling party's access to such payments. In India, elections are particularly expensive and labour intensive. Bar the outright capturing of ballot boxes, it is extremely difficult for a ruling party to rig elections.

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26 Adam Raphael has this to say about a recent British arms deals, "All have been shrouded in secrecy, all involve large commission payments, which have inflated the Tornado sales price by between 30 and 50 percent, and moast involve barter arrangements with poor countries that cannot afford, and arguably do not need, such sophisticated weapons." Raphael [7 May 1989].

27 Confidential source, (Delhi, March 1983).

28 Gupte [November 1987].

In order to be successful, large sums of money are required to fund the 'carpet bombing' style of election campaigning which the Indian electorate requires - the media do not offer an adequate source of communication as yet because the voting public demands to see the people it will elect, either on posters or in the flesh. Traditionally, the Congress Party has looked to landowners all over the country and commercial interests in Bombay to provide the vast amounts of finance required to fund election campaigns. However, there are inevitable political costs involved, many of which may directly contradict manifestos. Thus, if the ruling party can use external contracts to enlarge its coffers, it will be less of a hostage to powerful domestic interst groups.

Once corruption enters the equation, the logic of India's defence build-up in recent years begins to appear more understandable. The armed forces push and lobby for advanced military technology, which is commonplace in most countries - in one sense that is the professional role of the amred forces, to ensure that the country is as adequately defended as possible. Self interest within the bureaucracy may endorse the military view of India's security problems. Increased allocations raise the relative status of the recipient departments, whether it be railways, education or defence. Also, senior representatives from the MoD and the MEA would possibly fall into the élite group which consider India to be a major power in the making.

In principle, bureaucratic self-interest should be counter-balanced by both the PACC in the first instance and, via the annual parliamentary debate at least, the Lok Sabha (lower house). This does not happen. The Lok Sabha is generally starved of useful

information from which it might mount a more searching policy debate than exists at present and generally increase its ability to assess the situation. Yet, at the same time, Indian politicians do not seem particularly interested in taking up the relevant issues, either due to apathy, an unwillingness to come close to criticising their patrons, or because they too endorse the pursuit of great power status. Finally, the PACC and its advisors may have more than political status to gain from granting the requests made by the armed forces, especially if the source of defence equipment is from the West.

CONCLUSION

The preceeding chapters have attempted to trace, analyse and understand the Indian defence sector since 1947. However the phenomenon is to be understood, it cannot be disputed that the process has been both extremely expensive and unwieldly; tying the threads together produces a result which seems chaotic, unplanned and particularly inappropriate.

First and foremost, India is an extremely poor country; amidst the population of at least 800 million people (which will likely reach the one billion level before the end of the century) at least 50% live below the poverty line[1]. Within this sector there exists desperate hardship. Homelessness, overcrowding, underemployment (very few people in India are unemployed), decaying infrastructure, illness and lack of sanitation are rife in the major cities, such as Bombay, Calcutta and Delhi. In the countryside, where 65% of the population still live, there is environmental destruction and decay, land shortage and maldistribution, poverty, helplessness and inadequate social justice. Millions of the rural poor have migrated to cities and continue to do so. Against this backdrop of social and economic malaise, the record of both the Union and State Governments is less than spectacular.

On the one hand the state has always professed to possess a qualitatively different level of concern for the poor and

1 40 % of the Indian population is below 14 years of age and between 1971 and 1981 India's population rose by nearly 25%, Economic Intelligence Unit [1986], p.6.

disadvantaged than other developing countries; the democratic socialism of Nehru and his colleagues, the founders of modern India, has ostensibly lived on throughout the decades. Both democratic and socialist structures still exist, witness, for example, the stress upon free elections, the parliamentarry process and planned development. On the other, however, the framework of democratic socialism has been largely abandoned in practice. After forty years of independence the country's achievements in certain arenas, such as big science, technology and industrial growth have been relatively impressive. Nevertheless, the progress and gain overall has been unevenly spread. Thus, for example, India's per capita public expenditure is a mere $8, only $1 more than Burma, one of the most retarded development states in the world, and $13 less than China[2]. In recent years the role of the state in development has been reduced due to the adoption of economic liberalisation policies. Even so, over the past two decades the state has shown a declining interest in the wider problems of underdevelopment.

India's development failures and the gradual devaluation of the democratic system are rooted in complex political processes which have many components. Centrism, mismanagement, corruption, inertia, power politics, the longevity of the Congress 'system' and intranational chauvinism have all played their parts[3]. Nor should the sheer magnitude of the problems facing successive Indian leaders be discounted. A full explanation of both are beyond the scope of this essay[4]. Suffice to say, therefore, that the Indian political

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2 Sivard [1987], Table III, p.48.

3 The concept of the Congress 'system'

4 For an excellent analysis of the political economy of the Indian state see Rudolph and Rudolph [1987].

system, though both complex and contradictory, is generally and increasingly failing to reach the standards set by modern India's founding fathers.

Although the links between political decline and militarisation in the widest sense are rarely made, the defence sector in India connects in important ways to this process of degeneration. The exagerated activities of the defence sector are both an expression of and a distraction from political problems. In India, the national security threat has on countless occaisions been used to distract attention away from the country's internal political and developmental problems. Indeed, the timing of the nuclear test in 1974 may well have been influenced by the domestic political problems faced by Mrs Gandhi at that time. The attention paid to the defence sector, particularly during the 1980s, also reflects the state's diminishing concern over finding lasting and meaningful solutions to the country's formidable development problems. This is not to suggest that defence expenditure is not required but it is the level of expenditure and the direction of procurement which raises concern. Indian leaders appear to feel that tremendous military strength and economic dynamism in some sectors can co-exist with extreme poverty and minimal underdevelopment - the obvious lessons currently being understood by the Soviet Union appear to have been missed in India. The pursuit of great power status effectively signals the inability and unwillingness of the state to prioritise sustainable development,. It seems that, to the state, resources are better spent and more urgently required in the defence sector than in other areas which might contribute to sustainable development. For example, defence allocations are three times higher than health allocations even though, for example, the country ranks with poverty-

stricken Nepal regarding infant mortality rates and life expectancy at birth[5].

Economically, the impact of increasing defence expenditures are difficult to assess. Defence allocations may reflect considerable opportunity costs, crowd out investment funds, dimish the scope for welfare, create inflation, reduce foreign exchange reserves and affect adversely terms of trade, as has been the case with defence related trade with the Soviet Union. Obversely, given the impossibility of measuring security as a public good, or indeed, the pump-priming effect of increased activity in the defence sector, the precise economic impact of defence cannot be calculated. Nor is it possible to reach even the most tentative assessments in the absence of adequate data regarding foreign exchange outlays.

Nevertheless, despite the poverty of data and the complexity of analysis, the view that India's current economic crisis has been vastly exacerbated by extravagent defence procurement cannot be dispelled. The extent of the current Government's fiscal crisis has only recently come to light. On the one hand, paradoxically, the Indian economy is booming. In recent months the economy seems to have moved to a higher growth path, leaving behind the traditional 'Hindu rate of growth' (c.3%) of the 1960s and 1970s; in 1989 GDP may expand by a record 9% following an exceptional monsoon. The key to this dynamism lies in the expansion of manufacturing output and a general freeing up of the economy to prevent bottlenecks and ease the acquisition of credit. On the other, however, the Prime Minister has allowed Government finances to slide to a dangerous level and the country is facing a crisis which threatens what the World Bank

5 Sivard [1987], Table III, p.49.

euphemistically labels 'fiscal collapse', i.e. bankruptcy, by the mid-1990s.[6]

Currently, India's economic problems focus specifically upon a burgeoning foreign exchange crisis - during fiscal year 1988-89 the country's foreign exchange reserves dropped by $1.16 billion, the greatest downturn this decade[7]. Equally, India's domestic and foreign debts are rising dramatically. Although India is not traditionally seen as a heavily indebted country and remains creditworthy, external debt has reached Rs.80,000 crore, which is the fourth highest developing country foreign debt after Argentina, Brazil and Mexico. The differing size of these countries' economies in relation to India's and the sharp devaluation of the rupee over the past two years confuses the picture. A much clearer perspective can be gained by considering debt service ratio, the loans and interest which a country repays as a percentage of foreign currency inflow: in India the burden has increased from 8.1% in 1981 to at least 26% in 1989.[8]

The majority of India's fiscal problems stem from the Government's trade liberalisation policies which have increased the country's foreign exchange expenditures. Yet the defence modernisation programme of the 1980s is also responsible for the fiscal predicament, although by exactly how much is very difficult to answer. One estimate has suggested that short-term and defence loans, categories usually omitted from the Indian Government's figures, together amount to Rs.3,000 crore, or 3.75% of the foreign

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6 Housego [27 February 1989].

7 Housego [27 February 1989].

8 Thakurta [15 May 1989], pp.68-69.

debt[9]. Another puts the estimate somewhat higher at Rs.4,000 crore, or 5% of the external debt[10]. However, the total is probably much higher. For example, the cost of the 40 Mirage 2000 alone was at least Rs.1,500 crore (approximately $1 billion at early-1989 exchange rates)[11]. Add to this the $1.3 billion (Rs.1,950 crore) deal with Bofors, the £55 million paid for Hermes, the burgeoning foreign exchange outlays required for the LCA programme, a series of major deals with the Soviet Union, the base at Karwar and many other infrastructural improvements and the numerous servicing and training programmes which have been set up with foreign defence companies, and the foreign exchange outlays begin to seem extremely high. Or, put another way, the defence procurement budget in 1988-89 totalled Rs.3,173 crore and it was estimated that this element of the budget would have to rise to Rs.6,000 crore to continue debt repayment and to furnish projected requirements[12].

The scale of India's fiscal crisis may send this erstwhile independent country into the arms of the IMF, a move which the previous Government staunchly resisted through the early-1980s. Rising defence allocations will have contributed considerably to this situation. Why, then, has the Government allowed itself to get into such a situation which has weakened the economy and may lead to the introduction of several IMF-backed austerity measures which will cost the incumbent Government dearly in votes during an election year?

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9 Thakurta [15 May 1989], p.69.

10 Gupta and Thakurta [28 February 1989], p.43.

11 Gupta and Thakurta [28 February 1989], p.45.

12 Gupta and Thakurta [28 February 1989], p.43.

First and foremost, it would be untenable to suggest that the expenditure on defence is wholly wasteful. India does have a number of security considerations which require recurrent defence expenditures (see Chapter Three). These range from the immediate security threats posed by Pakistan and China, to the more distant threat of continuing trouble in the Middle East and the superpower build-up in the Indian Ocean.

However, whilst accepting the country's need for defence, the policy process since 1947 has been haphazard. At the outset, Nehru appeared to attempt to construct a security policy which relied upon the foreign policy process and non-involvement in Cold War politics. These were the principal means of ensuring that India avoided the need to request foreign military aid, as other Third World countries were doing at that time, and, in addition, forestalled the requirement for high defence expenditures which would directly compete with resources for development and affect as well the Congress Party's chances of political survival.

Nevertheless, Nehru appeared not to follow through with his broad policy objectives. Whilst he did take steps to provide the MoD with policy guidelines which started with the commissioned work of Patrick Blackett, nothing became of the latter's recommendations for a cost-benefit approach to the defence sector. Nehru appeared to accept the need for what would be called in modern parlance an alternative defence policy based upon low expenditure and commensurately low expectations. However, although actual defence expenditures remained low, activity within the defence sector was considerable.

First, a great deal of defence procurement was covered by the 'sterling balances' which obviated the need to expend valuable foreign exchange and kept the size of the defence budget within acceptable political and fiscal limits. At that time, Britain was the major arms supplier to the Indian sub-continent. Second, the armed forces paid little to Nehru's declared policy on defence, although it is by no means clear that he was sincere in his oft-stated desire to place defence in a junior position to other national concerns. The service chiefs made no effort to assist the MoD with the implementation of either the guidelines suggested by Blackett or the defence policy adopted by the Cabinet in 1949. To a certain extent there was a fit between the Blackett recommendations and the policy guidelines adopted in 1949. Both envisaged a low key defence policy which prioritised the ground-based defence of North West India given the prevailing threat from Pakistan and the unresolved dispute over Azad Kashmir. Equally, the policy was designed to place considerable reliance upon diplomatic efforts to ensure that any future war between India and Pakistan would be resolved at the conference table rather than the battlefield.

These and other initiatives were designed to underpin two aspects of defence policy. First, to ensure that the defence sector expenditure would not spiral out of control which would result in greater influence for the armed forces. Second, it was intended to make a visible link between defence and foreign policy. However, the policy guidelines were poorly implemented. Whilst defence expenditure remained low, the armed forces managed to ensure that their favoured missions, such as long-range bombing, were adopted. In the case of the IAF, this resulted in the procurement of advanced long-range bombers in the form of the Canberra. The Navy, however, was less

fortunate and did not receive a great deal of new equipment, with the notable exception of an aircraft carrier. Nevertheless, the Navy did manage to persuade the Government to accept the need in principle for a blue, not a brown water strategy. The latter would have been more appropriate for India at that time. Thus, once the need for a blue water strategy had been adopted it was only a matter of time before a major naval build-up ensued, once foreign exchange reserves had increased sufficiently - inevitably technology followed the identification of key missions otherwise, by definition, India was inadequately defended.

Consequently, between 1947 and 1962, the Nehru Government pursued two contradictory defence polices. The first, which was intended to reflect restraint, was ignored and was largely for the consumption of the Indian public and the international community. The second projected India as a major or significant power in the making. This was the hidden agenda of the Indian élites during this and subsequent periods. They believed that once independence had been achieved, India was destined to become a politically significant and militarily strong nation. In reality, there was no suggestion that the élites wished their country to remain dependent upon major powers for defence or, indeed, military equipment. In time, India would develop economically which would facilitate military and political aggrandisement. During the period 1947-62 decision makers allowed the armed forces to prepare the foundations for such a defence posture, which did not preclude either the production of nuclear weapons or the procurement of advanced conventional military technology.

The 1962 war with China ended in ignominious defeat for India. Though relatively well equippped overall, the armed forces were not well prepared for defence against China, leadership and decision making was at fault and the overall performance of the defence forces was extremely poor. In the aftermath of the conflict, the Government reacted decisively by increasing defence expenditures, raising procurement and devoting more resources and attention to indigenous defence production. However, at no point did the Indian Government appear to consider a defence review to assess why the country fared so badly in 1962 and, furthermore, to find a fit between defence requirements and defence expenditures. Instead, a series of technological fixes were applied to the defence sector which raised both procurement and expenditure but did not essentially change the configuration of the prevailing defence posture.

The essential point to be gleaned from this early period is that Nehru allowed a situation to develop between 1947 and 1962 which placed the defence sector on a certain trajectory which would inevitably have resulted in a large scale defence build-up. Thus, although the 1962 war was important in many ways it was not the catalytic event which cast India away from a defence posture based upon restraint and into a reactive defence build-up designed to defend the country better on all fronts. To a large extent the required dynamism was already present well before the Sino-Indian war. The defence policy adopted in 1964 was more a definite expression, qualification and reiteration of what had been in motion since the late-1940s; essentially it was more of the same but with a considerable added impetus brought on by defeat and national humiliation.

Throughout the late-1960s India steadily increased its defence capability. The new defence plan adopted in 1964 called for considerable across-the-board increases although the Army received many of the new resources made available and the Navy much less. This was a consequence of the failure in 1962 and the agreed culpability of the Army. In addition, the Indian Government endeavoured to consolidate links with the Soviet Union in a bid to acquire defence equipment at concessional prices with payment in rupees.

In 1965 India fought its second war with Pakistan. India had little difficulty in asserting its undoubted military superiority. It was, however, a short-lived and fruitless conflict from which neither side gained much. One salutary lesson learned by India during the conflict was the deleterious impact of the arms embargo placed on both sides by Britain and the United States. The embargo was not lifted for several years and for both practical and political reasons India was pushed further towards the Soviet Union.

The combination of increasing domestic political problems and economic stagnation coupled with ongoing difficulties with the Soviet Union, primarily over the latter's relationship with China, prevented India from continuing its defence modernisation programme. Nevertheless, enough had been achieved on both the organisational and procurement fronts to permit Indira Gandhi to mount a devastating attack on Pakistan in 1971, which resulted in the partition of the latter and the creation of Bangladesh.

With fewer external, regional problems to confront and mounting political and economic problems, Mrs Gandhi paid relatively little

attention to regional and security issues over the 1970s. The hasty conclusion of a Treaty of Cooperation and Friendship with the Soviet Union in 1971 paved the way for a smoother flow of Soviet defence equipment once the Kremlin had resolved its own problems over whether to side with India or Pakistan. Certainly, the consolidated relationship with the Soviet Union juxtaposed with the inability to purchase from other major arms suppliers amounted to a burgeoning level of dependency upon the Soviet Union. However, despite India's prominent role in the Non-Aligned Movement, dependency upon the Soviet Union was not considered to be as much a contradiction as would have been a similar relationship with the United States.

In 1977 Mrs Gandhi lost power to the Janata coalition. The election of Moraji Desai coincided with an upturn in the Indian economy and increased foreign exchange reserves: in 1974-75 reserves hovered between Rs.500 and Rs.1,000 crore but by 1977-78 they had risen to well over Rs.4,500 crore[13]. The improved economic situation permitted the new Government to embark upon a defence modernisation programme. By the late-1970s much of the defence equipment imported during the 1950s was undoubtedly in need of modernisation or outright replacement, the IAF in particular had for some years been lobbying for such a programme. The Janata Government tentatively pushed the programme forward and, although few deals were announced during the Party's short period in office, substantial moves were made to assess the implications of an across-the-board modernisation programme.

In 1980 Mrs Gandhi was re-elected and soon after the defence modernisation programme acquired new dynamism and a more focused direction. This was in part because the new Prime Minister was less

13 Thomas [1982], p.113, Appendix I, Table A.

equivocal and more confident over her view of defence and foreign policy - by contrast the Janata Government lacked both vision and conviction. Mrs Gandhi, however, returned to 1 Safdarjang Road with a vision of tranforming India into a major power by capitalising upon the strategic advantage gained in 1971 once the country had the foreign exchange resources to afford a defence build-up.

Throughout the 1980s the defence modernisation programme proceeded apace and, arguably, went out of control. Following the assassination of Mrs Gandhi her son, Rajiv, pursued a similar policy on defence. Whilst other developing countries, including OPEC members, back-pedaled as their inventories became saturated, the Indian Government forged ahead. What followed was a defence modernisation programme of immense proportions which clearly went beyond the need to respond to external events, such as the renewed relationship between the United States and Pakistan, the latter's nuclear ambitions and the problems associated with the new Cold War, increased conflict in the Middle East and the superpower build-up in the Indian Ocean. The nature of the defence build-up spanned the procurement of a second aircraft carrier and extremely advanced aircraft, tanks and artillery. Coupled with bold external initiatives such as the veiled but recurring threat to bomb Pakistan's nuclear facilities, aggressive military training operations, the intervention in Sri Lanka, operations around the Siachin glacier, renewed talk of nuclear weapons and the operation to prevent a coup in the Maldives, India served unequivocal notice upon the rest of the world that it intended to be taken seriously as a military power, and not just in South Asia.

By 1988 the defence sector was in disarray. Although defence expenditure rose to Rs.13,000 crore in 1988-89 from Rs.3,604 in 1981, the defence sector suddenly faced a major resource lacuna. The bold plans to realise the Army 2000 plan under which the Army would grow to 45 divisions with increased mechanisation has come to a halt. The sophisticated aircraft and ships purchased in recent years are under-armed and operational tanks are in short supply. The MoD does not have the money to service old contracts and has asked both western suppliers and the Soviet Union to defer payments. New procurement plans which could have resulted in an additional aircraft carrier, an advanced jet trainer and a large new helicopter force have been shelved and will probably be abandoned.[14]

The disjuncture has in part been caused by the rapid fall of the rupee and the foreign exchange crisis discussed above. Nevertheless, the defence crisis should not have happened in India, a developing country renowned for its cautious bureaucracy and developed decision making process. The recent collapse in the defence sector begs numerous questions. Why, when defence procurement decisions can be vetoed by the Finance Officer in the MoD, was a more cautious policy not adopted considering the obvious trend towards domestic and external debt, currency devaluation and foreign exchange depletion? Why has the Political Affairs Committee of the Cabinet allowed such a situation to develop, especially in an election year? Why have the armed forces and the MoD apparently planned so badly - in the 1988-89 defence budget the combined capital outlay for the armed forces actually declined, yet, the projected requirements were almost double the value of the resources put aside for modernisation and acquisitions? Why has the desire for great power status prevailed

14 Gupta and Thakurta [28 February 1989], p.43.

over the country's pressing development needs, of which the 1987-88 drought provided such a stark reminder. Why has the country apprently failed so badly in its bid to become more self-sufficient in the direction of indigenous production? In brief, why has India consistently failed to cut its defence coat to suit its economic cloth?

The first and possible most important reason for the current situation relates to the formative period between 1947 and 1962. During this period Nehru permitted the armed forces to acquire an increasing grip upon the decision shaping process - effectively the MoD was both too poorly equipped and marginalised within the decision making process to offer the necessary counter-balance. Even so, it is far from certain that key bureaucrats would have countered the demands of the armed forces on the one hand and the acquiescence of the political élites on the other.

Once the broad policy framework had been established, so were the key missions for the armed services. These were ambitious and inevitably required expression through the acquisition of the relevant technology for their fulfilment, such as long-range bombers and an aircraft carrier. Thus, the evolution of defence policy was largely unrestrained during the formative period. Although the armed forces were restrained to a degree, witness the delayed growth of the Navy, they were not checked.

Second, the political and bureacratic élites have long held an agenda the realisation of which will cast India as a major power on the world scene. There is a fundamental belief in the country's greatness and destiny. The attainment of great power status was

significantly slowed during the late-1960s and 1970s due to resource constraints. In 1980, the twin heads of steam which had built up in favour of across-the-board modernisation and the achievement of the necessary steps towards great power status were realised.

The complementary agendas of both the armed forces and the political élites explains both the failure of the indigenous defence industry and the ad hoc nature of defence procurement. First, although the domestic defence industry has always been capable to a degree of providing defence equipment for all three services it has not recieved sufficient political and bureaucratic support. Thus, the armed forces demanded the most advanced equipment available and have traditionally accepted indigenous defence equipment with reluctance and under duress. The evidence available from, for example, Public Accounts Committee reports, indicates how difficult the armed forces have been as a customer and how little support the public sector defence companies have received from the institutions and committees, such as the MoD and PACC, which should have counter-balanced and rationalised the individual requests and overall approach of the armed forces. Thus, the indigenous defence industry required but did not receive the most pronounced protection and nurturence, particularly given the rate of military technological change which obtains in developed countries and competes with indigenous defence industries through the international arms trade.

The failure to introduce balance and rationality into the procurement process was due to the complimentary desire on the part of bureaucrats and politicians to see India develop as a major military power, but only in part. Over the years there have been no attempts to nurture an independent body capable of countering the demands of

the armed forces at a technical level. Thus, the armed forces have been allowed to exploit the technological momentum and acquire follow-on systems without recourse to cost-benefit or utility analyses - new systems are considered necessary and urgent, therefore, because the military feel them to be so. Furthermore, the potential for rent-seeking should not be ignored. Whilst it is impossible to calibrate the extent to which defence procurement is decided by commissions, such practice is known to exist. This may lead to uneccesary or ill-conceived procurement. For example, the IAF was rumoured to be unhappy with the Mirage 2000 primarily because it had sold poorly on the international market and was powered by a single engine, whereas the IAF required a twin engined plane. It was the Government which persuaded the IAF to accept the plane, not the other way around[15]. Corruption and rent seeking not only provides another explanation for the ad hoc nature of decsion making and procurement. It also explains why the procurement process was allowed to reach such chaotic proportions and finally collapse during an election year; the need for rents is particularly great prior to an election and more so if the ruling party senses the possibility of defeat at the polls.

15 Confidential conversation with the author, (Delhi November 1983).

APPENDIX I

INDIA AND PAKISTAN: MILITARY BALANCE 1988 - 89

INDIA

GDP	1986/7: Rs 2,927.9 bn ($228.98 bn)	
	1987/8: Rs 3,292.41 bn ($253.88 bn)	
growth	1985/6: 5.9%	1986/7: 4.4%
Inflation	1986: 8.7%	1987: 8.8%
Debt	1985: $36.7bn	1986: $41.1bn
Def bdgt*	1987/8: Rs 125.12bn ($9.65bn)	
	1988/9: Rs 130.00bn ($9.89bn)	
$1 = Rs	(1985/6): 12.24	(1986/7): 12.79
	(1987/8): 12.97	(1988): 13.14

Rs = rupees

Population: 799,727,000

	13-17	18-22	23-32
Men:	45,552,000	40,676,000	62,413,000
Women:	42,498,000	37,059,000	58,182,000

TOTAL ARMED FORCES:
ACTIVE: 1,362,000.
Terms of service: voluntary.
RESERVES: (obligation to age 60) Army 200,000. Territorial Army 40,000. Air Force (Regular, Air Defence, Auxiliary) exist, strengths unknow.

ARMY: 1,200,000.
HQ: 5 Regional Comd (= Fd Army), 10 Corps. 2 armd div (2/3 armed, 1 SP arty (SP fd, 1 med regt) bde).
1 mech div (3 mech (4/56 mech bn, 3 armd regt), 1 arty bde).
20 inf div (2-5 inf, 1 sarty bde; some have armd regt).
11 mtn div (3-4 bde, 1 or more arty regt).
17 indep bde: 8 armd, 7 inf, i mtn,, 1 AB/cdo.
3 indep arty bde.
6 AD bde.
4 engr bde.
These formations comprise:
46 tk regt (bn).
17 mech, 329 inf bn.
9 AB/cdo bn.
164 arty regt (bn): 1 hy, 5 MRL, 50 med (incl 5 SP), 69 fd (incl 3 SP), 39 mtn.
29 AA arty regt; perhaps 10 SAM gp (3-5 bty each).
7 sqn, 25 flt, Air Observation.
6 ATK/tpt, 4 liaison hel sqn.

EQUIPMENT:
MBT: 3,150 (E 500 in reserve): some 800 T-55, 650 T-72, 1,700 *Vijayanta*.
LIGHT TANKS: 100 PT-76
MICV: 700 BMP-1, some *Sarath* (BMP-2).
APC: 400 OT-62/-64, 50 BTR-60.
TOWED ARTY: some 2,165: 75mm/76 mm: 900 75/24 mtn, 215 Yug M-48; 88mm: 1,000 25-pdr (retiring); 100mm: 185 M-1944; 105mm: some 800 (incl) M-56 pack), some 30 IFG Mk II; 130mm: 550 M-46; 140mm: 150 5.5-in (retiring); 155mm: 30 FH-77B.
SP ARTY: 105mm: 80 *Abbot*; 130mm: 50 mod M-46.
MRL: 122mm: 80 BM-21.
MORTARS: 120mm: 1,000; 160mm: 200.
ATGW: SS-11 B-1, *Milan*, AT-3 *Sagger*.
RCL: 106mm: 1,000+ M-40.
AD GUNS 2,7450: 23mm: 140 ZU 23-2, 75 ZSU-23-4 SP; 40mm: 1,245 L40/60, 790 L40/70; 94mm: 500 3.7-in.
SAM: 26 SA-6, 620 SA-7, 20 SA-8A, SA-9, 25 *Tigercat* launchers.
HELICOPTERS: 99 *Chetak* (some with 4 AS-11), 60 *Cheetah*.

DEPLOYMENT:
North - 1 Corps with 2 inf, 1 mtn div; 1 mtn, 1 indep inf, i indep arty bde. 1 Corps with 4 inf div; 2 indep armd, 1 indep inf, 2 indep arty bde.
West - 1 Corps with 1 armd, 1 mech div; 1 Corps with 2 inf div; 1 Corps with 4 inf div.
Central - 1 Corps with 1 armd, 2 inf div, plus 3 indep div (2 if, 1 mtn).
East - 3 Corps each with 3 mtn div.
South - 1 Corps with 4 div.

NAVY: 52,000, incl naval air force.
PRINCIPAL COMMANDS:
WESTERN; BASES: Bombay (HQ), Goa, Lakshadweep (Laccadive Is) Karwar (under constructio).
EASTERN; BASES: Visakhapatnam (HQ), Calcutta, Port Blair (Andaman Is).
SOUTHERN (training); Cochin (HQ).
NAVAL AIR: HQ, Goa.
SUBMARINE: HQ, Visakhapatnam.
SUBMARINES: 14:
  SSGN: 1 *Chakra* (Sov *Charlie-I*) with SS-N-7 *Starbright* USGW; plus 533mm TT. (presence of USGW not confirmed).
  SS: 13
    3 *Sindhughosh* (Sov *Kilo*) with 533mm TT.
    2 *Shishumar* (FRG T-209/1500) with 533mm TT.
    8 *Kursura* (Sov *Foxtrot*) with 533mm TT.
PRINCIPAL SURFACE COMBATANTS: 31:
  CARRIERS: 2: "V" class (CVV) (UK light fleet), (1 in refit). AC: 8 *Sea Harrier* attack, 8 *Sea King ASW?ASUW (Sea Eagle* ASM).
  DESTROYERS: 5 *Rajput* (Sov *Kashin*) DDG with 2 x 2 SA-N--1 *Goa* SAM; plus 4 SS-N-2 *Styx* SSM, 5 x 533mm TT, 2 x ASW RL, 1 Ka-25 or 27 hel (OTHT).
  FRIGATES: 24:
    3 *Godavari* with 2 x *Sea King* hel, 2 x 3 ASTT; plus 4 x SS-N-2 *Styx* SSM.
    6 *Nilgiri* (UK *Leander*) with 2 x 3 ASTT, 1 x 3 *Limbo* ASW mor, 4

with 1 *Chetak* thel, 2 with 1 *Sea King*, plus 2 x 115mm guns.
2 *Talwar* (UK *Whitby*) with 1 x *Chetak* hel, 2 x SS-N-2C *Styx* SSM.
8 *Kamorta* (Sov *Petya*) with 4 ASW RL, 3 x 533mm TT.
2 *Khukri* (ASUW) with 4 SS-N-2C, hel deck,
2 *Beas* (UK *Leopard*), 1 *Kistna* (UK *Black Swan*), all trg.

PATROL AND COASTAL COMBATANTS: 32:

CORVETTES: 5
3 *Vijay Durg* (Sov *Nanuchka* II) with 4 x SS-N-2B *Styx*.
2 *Veer* (Sov *Tarantul*) with 4 x SS-N-2C.

MISSILE CRAFT: 13 *Vidyut* (*osa*) with 4 x SS-N-2.

PATROL, INSHORE: 14:
12 SDB Mk 2/3, 2 *Osa* PFI.

MINE WARFARE: 17:

MINELAYERS: None, but *Kamorta* FF and *Pondicherry* MSO have minelaying capability.

MINE COUNTERMEASURES: 17:
9 *Pondicherry* (Sov *Natya*) MSO.
2 *Bulsar* (UK '*Ham*') MSI.
6 *Mahé* (Sov *Yevgeny*) MSI<.

AMPHIBIOUS: 10:
1 *Magar* LST, capacity about 12tk, 200 tps.
9 *Ghorpad* (Sov *Polnocny* C) LSM, capacity 6 tk, 140 tps.
Plus craft: 8 *Vasco da Gama* LCU.

SUPPORT AND MISCELLANEOUS: 18:
2 *Deepak* AOR, 1 spt tkr, 1 *Amba (Sov Ugr)* sub spt. 1tpt, 2 ocean tugs, 5 AGHS, 5 AGOR, 1 trg.

NAVAL AIR FORCE: (2,000);
28 cbt ac, 53 armd hel.

ATTACK: 1 sqn with 8 *Sea Harriers* FRS Mk-51,
2 T-60 trg (more being delivered).

ASW: 1 Ac sqn with 10 *Alizé* 1050 (land-based); 5 hel sqn with 5 Ka-25 *Hormone* A (in *Rajput* DDG, Ka-27 to replace), 18 Ka-27, 30 *Sea King* Mk 42 a/B, 10 *Chetak* (for frigates).

MR: 2 sqn: 3 Il-38, 5 Tu-142M *Bear* F.

COMMUNICATIONS: 1 sqn with 10 BN-2 *Islander*, Do-228.

SAR: 1 hel sqn with 6 *Sea King* Mk 42A/C.

TRAINING: 2 sqn: 6 HJt-16, ac; 2 *Chetak*, 4 Hughes 300 hel.

AIR FORCE: 115,000;
714 cbt c (plus 9 in store), 12 armed hel.
5 Air Commands.

BOMBERS: 1 lt bbr sqn with 10 *Canberra*.

FGA: 25 sqn:
5 with 90 MiG-23 BN/UM;
7 with 90 MiG-21 MF/U;
4 with 72 *Jaguar* IS;
4 with 72 MiG-27;
4 with 80 *Ajeet*;
1 with 20 *Marut*.

FIGHTERS: 13 sqn:
2 with 40 MiG-29;
2 with 40 *Mirage* 2000 (36 -H, 4 -TH; 9 more in store);
2 with 45 MiG-23MF/UM;

7 with 150 MiG-21/FL/bis/U.
Air Defence Ground Environment System.
RECCE: 3 sqn:
1 with 8 *Canberra* PR-57;
1 with 6 MiG-25R, 2 MiG-25U;
1 with 4 HS-748.
TRANSPORT:
AIRCRAFT: 11 sqn:
5 with 70 An-32 *Sujlej*;
2 with 20 an-12B;
1 with 10 DHC-3;
1 with 15 DHC-4;
2 with 16 HS-748, 12 Il-76 *Gajraj*;
HELICOPTERS: 6 sqn with 80 Mi-8/-17, 2 Mi-26hy tpt, E 12 Mi-25.
VIP: 1 HQ sqn with 2 Boeing 737,
7 HS-748.
LIAISON: flt and det: 16 HS-748, C-47.
TRAINING:
20 *Canberra* T-4/-13/-67, 20 *Hunter* T-66, 5 *Jaguar* IB, 60 HT-2, 120 *Kiran*, some 20 HPT-32 (replacing HT-2), 44 TS-11 (being replaced with *Kiran II*), 27 HS-748 ac; 20 *Chetak* hel.
AAM: R-23R/T *Apex*, R-60 *Aphid*, R-550 *Magic*, AA-2 *Atoll*.
ASM: AS-30; AS-11B (ATGW), AS-7 *Kerry* (with MiG-27).
SAM: 30 bn: 280 *Divina* V75SM/VK (SA-2), SA-3.

FORCES ABROAD:
SRI LANKA: Some 53,000; Army: 50,000: 4 inf div HQ. Plus naval, air, and Central Reserve Police Force.

MMMM

MMMM

RCL: 75mm: Type-52, 106mm: M-40A.
AD GUNS: 14.5mm; 35mm;
37mm: Type-55/-65;
40mm: M1;
57mm: S-60/Type-59.
SAM: 100 *Stinger*, 144 RBS-70.

AVIATION:
AIRCRAFT:
LIAISON: 2 *Turbo Commander*, *Queen Air*, 1 Cessna 421, 55 *Mashshaq*.
OBSERVATION: 40)-1E, 50 *Mashshaq*.
HELICOPTERS: 20 AH-1S (with *TOW*), 16 Mi-8, 35 SA-330, 23 *Alouette* III, 13 Bell 47.

NAVY: 16,000 (incl Naval Air).
BASE: Karachi (Fleet HQ).
SUBMARINES: 6:
2 *Hashmat* (Fr *Agosta*) with 533mm TT (F-17 HWT), *Harpoon* USGW
4 *Hangor* (Fr *Daphne*) with 533mm TT (L-5 HWT),
Plus 3 SX-404 SSI SF insertion craft.
DESTROYERS: 8:
1 *Babur* (UK *Devonshire*) with 2 x 2 115mm guns; plus 1 *Alouette* hel.
6 *Alamgir* (US *Gearing*) (ASW) with 1 x 8 *ASROC*; plus 2 x 2 127mm guns, 2 with 2 x 3 *Harpoon* SSM.
1 *Badr* (UK *Battle*) with 2 x 2 115mm guns; plus 4 x 533mm TT, 1 x 3 ASW mor (assigned to Maritime Safety Agency).
PATROL AND COASTAL COMBATANTS: 29:
MISSILE CRAFT: 8
4 Ch *Huangfeng* with 4 x CSS-N-2 (HY-2) SSM.
4 CH *Hoku<* with 2 x CSS-N-2.
TORPEDO CRAFT: 4 Ch *Huchuan* PHT with 2 x 533 mm TT.
PATROL: 17:
COASTAL: 4 *Baluchistan* (CH *Hainan*) PFC with 4 x ASW RL.
INSHORE: 13:
12 *Queeta* (ch *Shanghai*) PFI (4 with Maritime Safety Agency).
1 *Rajshahi* PCL.
MINE WARFARE: 3:
3 *Mahmood* (US-MSC 268) MSC.
SUPPORT AND MISCELLANEOUS: 4:
1 *Nasr* (Ch *Fuqing*), 1 *Dacca* AOR, 1 survey, 1 ocean tug.

NAVAL AIR:
2 cbt ac, 9 armed hel.
ASW/MR: 1 sqn with 3 *Atlantic* (operated by Air Force; AM-39 ASM).
ASW/SAR: 2 hel sqn: 1 with 6 Westland *Sea King* (5 ASW with AM-39, 1 SAR), 4 SA-316B (ASW).
COMMUNICATIONS: 1 Fokker F-27 ac (Air Force).
ASM: AM-39 *Exocet*.

AIRFORCE: 17,600;
338 cbt ac, no armed hel.
FGA: 8 sqn:
1 with 16 *Mirage* IIIEP (some with AM-39 ASM), 3 III DP (trg);
4 with 62 *Mirage* 5 (58 -5PA/PA2, 4 - 5DPA/DPA2);
3 with 41 Q-5.
FIGHTERS: 11 sqn:
9 with 170 J-6/JJ-6;
2 with some 39 F-16 (31 -A, 8 -B).
RECCE: 1 sqn with 13 *Mirage* IIIRP.
TRANSPORT: 2 sqn:
1 with 13 C-130 (5 -B, 8 -E), 1 L-100;
1 with 1 *Falcon* 20, 2 F-27-200
(1 with Navy), 2 Beech (1 *Super King Air*, 1 *Bonanza*).
SAR: 1 hel sqn with 2 HH-43B, 4 *Alouette* III.
UTILITY: 1 hel sqn with 4 SA-321.
TRAINING: 1 sqn with 20 T-33A, 4 Ch Mig-15UTI; other ac incl 2 *Mirage* 5DPA2, 3 *Mirage* IIIDP, 2 J-6, 35 Cessna T-37C, 45 JJ-5, 12 CJ-6, 24 Reims Cessna FTB-337, 20 *Mashshaq*.
AD: 7 SAM bty:
6 with 6 *Crotale*;
1 with 6 CSA- 1 (SA-2).
AAM: *Sidewinder*, R-530, R-550 *Magic*.
ASM: AM-39 *Exocet*.

MMMM

ABBREVIATIONS

(	under 100 tons
)	part of unit is detached
+	unit reinforced
E	estimated
AA	anti-aircraft
AAM	air-to-air missile(s)
AAW	anti-air warfare
AB	airborne
ABM	anti-ballistic missile(s)
ac	aircraft
AD	air defence
adj	adjusted
AE	auxiliary(ies), ammunition carrier
AEW	airborne early warning
AF	stores ship(s) with RAS capability
AGHS	hydrographic survey vessel(s)
AGI	intelligence collection vessel(s)
AGOR	oceanographic research vessel(s)
AGOS	ocean surveillance vessel(s)
AH	hospital ship(s)
AK	cargo ship(s)
ALCM	air-launched cruise missile(s)
amph	amphibious/amphibian(s)
ANG	Air National Guard (US)
AO	tanker(s) with RAS capability
AOE	auxiliary(ies), fuel and ammunition, RAS capability
AOT	tanker(s) without RAS capability
APC	armoured personnel carrier(s)
AR	repair ship(s)
Arg	Argentinian
armd	armoured
ARNG	Army National Guard (US)
arty	artillery
AS	submarine depot-ship(s)
aslt	assault
ASM	air-to-surface missile(s)
ASTT	anti-submarine TT
ASUW	anti-surface ship warfare
ASW	anti-sub[illegible]warfare
AT	tug(s)
ATBM	anti-tactical ballistic missile
ATGW	anti-tank guided weapon(s)
ATK	anti-tank
Aus	Australian
avn	aviation
AWACS	airborne warning and control system
BB	battleship(s)
bbr	bomber(s)
bde	brigade(s)
bdgt	budget(s)
Be	Belgium
bn	battalion(s) *or* billion(s)
bty	battery(ies)
Bu	Bulgaria
CAS	combat air support
Cat	Category
cav	cavalry
cbt	combat
CBW	chemical and biological warfare
CC	cruiser(s)
Cdn	Canadian
cdo	commando
CG	SAM cruiser(s)
CGH	CG with helicopters
CGN	nuclear-fuelled CG
cgo	freight aircraft
Ch	Chinese (PRC)
COIN	counter-insurgency
comd	command
comms	communications
CONUS	Continental United States
coy	company(ies)
CV	aircraft carrier(s)
CVN	nuclear-fuelled CV
CVS	small CV
CVV	V/STOL and hel CV
CW	chemical warfare
CY	current year
CZ	Czechoslovakia
DD	destroyer(s)
DDG	destroyer(s) with area SAM
DDH	destroyer(s) with hel
def	defence
defn	definition
det	detachment(s)
div	division(s)
Dk	Denmark
ECM	electronic counter-measures
ELINT	electronic intelligence
elm	element(s)
engr	engineer(s)
EOD	explosive ordnance disposal
eqpt	equipment
ESM	electronic support measures
est	estimate(d)
EW	electronic warfare
excl	excludes/excluding
exp	expenditure
FAC	forward air control
fd	field
FF	frigate(s)
FFG	frigate(s) with area SAM
FFH	frigate(s) with helicopter
FGA	fighter(s), ground-attack
flt	flight(s)
FMA	foreign military assistance
Fr	French
FRG	Federal Republic of Germany
ftr	fighter(s) (aircraft)
FY	fiscal year
GA	Chinese Integrated Group Army
GDP	gross domestic product
GDR	German Democratic Republic
GLCM	ground-launched cruise missile(s)
GNP	gross national product
GP	general-purpose
gp	group(s)
Gr	Greece
GW	guided weapon(s)
hel	helicopter(s)
HWT	heavy-weight torpedo(es)
Hu	Hungary
hy	heavy
ICBM	intercontinental ballistic missile(s)
incl	includes/including
indep	independent
inf	infantry
INF	intermediate nuclear forces
IRBM	intermediate-range ballistic missile(s)
It	Italy
kg	kilogram(s)
km	kilometre(s)
KT	kiloton(s)
LCA	landing craft, assault
LCAC	landing craft, air cushion
LCM	landing craft, mechanized
LCT	landing craft, tank
LCU	landing craft, utility
LCVP	landing craft, vehicles and personnel
LHA	landing ship(s) assault
LKA	assault cargo ship(s)
log	logistic
LPD	landing platform(s), dock
LPH	landing platform(s), helicopter
LSD	landing ship(s), dock
LSM	landing ship(s), medium
LST	landing ship(s), tank
lt	light
LWT	light-weight torpedo(es)
m	million(s)
MAC	Military Airlift Command (US)
MARV	manoeuvring re-entry vehicle(s)
MBT	main battle tank(s)
MCC/DO	mine counter-measures vessels(s), coastal/inshore/offshore
MCMV	mine counter-measures vessel(s)
MD	Military District(s)
MEB	Marine Expeditionary Brigade(s) (US)
mech	mechanized
med	medium
MEF	Marine Expeditionary Force(s) (US)
MEU	Marine Expeditionary Unit(s) (US)
MFO	Multi-National Force and Observers
MHC/DO	minehunter(s), coastal/inshore/offshore
MICV	mechanized infantry combat vehicle(s)
MIRV	multiple independently-targetable re-entry vehicle(s)
misc	miscellaneous
Mk	mark (model number)
mob	mobilization
mod	modified/modification
mor	mortar(s)
mot	motorized
MPS	marine prepositioning squadron(s)
MR	maritime reconnaissance *or* motor rifle
MRBM	medium-range ballistic missile(s)
MRL	multiple rocket launcher(s)
MRV	multiple re-entry vehicle(s)
MSC/DO	minesweeper(s), coastal/inshore/offshore
msl	missile(s)
MT	megaton(s)
mtn	mountain
n.a.	not applicable
NGA	NATO Guidelines Area
n.k.	not known
NL	Netherlands
NMP	net material product
No	Norway
nuc	nuclear
OCU	operational conversion unit(s)
off	official
op/ops	operational/operations
org	organized/organization
OTH	over-the-horizon
OTHR	over-the-horizon radar
OTHT	over-the-horizon targeting
para	parachute
pax	passenger(s)/passenger transport aircraft
PCC/DO	patrol craft, coastal, inshore, offshore
pdr	pounder
PFC/DO	fast patrol craft, coastal/inshore/offshore
PFM	fast patrol craft, SSM
PFT	fast patrol craft, torpedo
PHM/T	hydrofoil(s), SSM/torpedo
Pol	Poland
Port	Portugal
RAS	replenishment at sea
RCL	recoilless launcher(s)
recce	reconnaissance
regt	regiment(s)
RL	rocket launcher(s)
Ro	Romania
RPV	remotely piloted vehicle(s)
RV	re-entry vehicle(s)
SAC	Strategic Air Command (US)
SALT	Strategic Arms Limitation Treaty
SAM	surface-to-air missile(s)
SAR	search and rescue
SDI	Strategic Defense Initiative
SES	surface-effect ship(s)
SIGINT	signals intelligence
sigs	signals
SLBM	submarine-launched ballistic missile(s)
SLCM	sea-launched cruise missile(s)
SLEP	service life extension programme
Sov	Soviet
Sp	Spain
SP	self-propelled
spt	support
sqn	squadron(s)
SRAM	short-range attack missile(s)
SRBM	short-range ballistic missile(s)
SS(C/I)	submarine(s) (coastal/inshore)
SSB	ballistic-missile submarine(s)
SSBN	nuclear-fuelled SSB
SSGN	SSN with dedicated non-ballistic missile launchers
SSM	surface-to-surface missile(s)
SSN	nuclear-fuelled submarine(s)
START	Strategic Arms Reduction Talks
STOL	short take-off and landing
STOVL	short take-off, vertical landing
SUGW	surface-to-underwater GW
Sw	Sweden
TA	Territorial Army (UK)
tac	tactical
TAC	Tactical Air Command (US)
tk	tank(s)
tkr	tanker(s)
tps	troop(s)
tpt	transport(s)
trg	training
TT	torpedo tube(s)
Tu	Turkey
UK	United Kingdom
UN	United Nations
UNDOF	UN Disengagement Observation Force
UNFICYP	UN Force in Cyprus
UNGOMAP	UN Good Offices Mission in Afghanistan and Pakistan
UNIFIL	UN Interim Force in Lebanon
UNTSO	UN Truce Supervisory Organization
URG	underway replenishment group(s)
USGW	underwater-to-surface GW
US	United States of America
UUGW	underwater-to-underwater GW
veh	vehicle(s)
VIP	very important person(s)
VLS	vertical launch system(s)
V(S)TOL	vertical(/short) take-off and landing
WP	Warsaw Pact
Yug	Yugoslavia

BIBLIOGRAPHY

Secondary Sources

Anthony, I., 'Soviet-Indian Defence Cooperation', Royal United Services Institute and Brassey's Defence Yearbook, (Brassey's, London, 1988).

Aerospace Daily, 'India's Soviet Windfall?', (24 October 1983), p.282.

Albrecht, U. and M. Kaldor, 'Introduction', in, Kaldor, M. and A. Eide, World Military Order: The Impact of Military Technology on the Third World, (Macmillan, London, 1979), pp.1-16.

Allison, G.T., Essence of Decision: Explaining the Cuban Missile Crisis, (Little Brown & Co., Boston, 1971).

Alker, Jr., H.R. and T.J. Biersteker, 'The Dialectics of World Order: Notes for a Future Archaeologist of International Savoir Faire', International Studies Quarterly, Vol 28, No 2, (1984), pp 121-142.

Amita, S., 'Subhas Chandra Bose: A Light On His Political Ideas As Related To The Problem of Indian Defence', Asian Affairs, Vol VI, No 1, (January-March 1984).

Andoni, L., 'Jordan calls in IMF assistance on foreign debt', Financial Times (London), (17 March 1989).

Asian Defence Journal, 'Indian Army to upgrade the tank units', (November 1981), p.36.

Asian Defence Journal, 'Mi-24 helicopters for the IAF', (November 1981), p.36, 38.

Asian Defence Journal, 'Tornado sales team in India', (November 1981), p.38.

Aviation Week and Space Technology, 'India Selects Jaguar International', (16 October 1978), p.26.

Balachandran, G., 'MBT: Attempting too much with too little', The Hindu(Madras), (6 December 1983).

Ball, N., The Military in the Development Process, (Regina Books, Claremont, Ca., 1981).

Ball, N., 'Third World Militaries and Politics: An Introductory Essay', Cooperation and Conflict, Vol. XVII, (1982).

Ball, N., 'Defence and Development: A Critique of the Benoit Study', Economic Development and Cultural Change, Vol. 31, (April 1983).

Baran, P.A. and P.M. Sweezy, Monopoly Capital: An Essay on the American Economic and Social Order, (Pelican, Harmondsworth, 1968).

Barroclough, G., An Introduction to Contemporary History, (Pelican, Harmondsworth, 1967)

Bedard, P., 'Overseas markets drying up for US arms makers', Defense Week, Vol 7, No 35, (8 September 1986), pp.1, 12.

Benoit, E., Defence and Economic Growth in Developing Countries, (Lexington Books, Mass., 1973).

Benoit, E., 'Growth and Defence in Developing Countries', Economic Development and Cultural Change, Vol 26, No 2, (1978).

Bhargava, G.S., South Asian Security after Afghanistan, (Lexington Books, Mass., 1983), 198pp.

Blechman, B., Nolan, J. and A. Platt, 'Pushing Arms', Foreign Policy, No 46, (Spring 1982), pp.138-154.

Blechman, B.M. and S.S. Kaplan, Force Without War: U.S. Armed Forces as a Political Instrument, (Brookings Institution, Washington, D.C., 1978).

Blomström M. and B. Hettne, Development Theory in Transition, (Zed Books, London, 1984).

Bobb, D., 'The Message From Moscow', India Today, (15 August 1983).

Bobb, D., 'Moscow's New Offensive', India Today, Vol IX, No 16, (31 August 1984), p.84.

Bobb, D. (et al), 'The Bofors Blast', India Today, Vol XII, No 9, (15 May 1987)

Bobb, D. (et al), 'Chinks in the Armour', India Today, Vol XII, No 13, (15 June 1987).

Booth, K., Strategy and Ethnocentrism, (Croom Helm, London, 1979), 191pp.

Bose, S.C., The Indian Struggle, (Asia Publishing House, New Delhi, 1964).

Bright, J., (ed), The Speeches of Jawaharlal Nehru, (Indian Printing Works, Lahore, 1946).

British Aerospace Dynamics Group News Release, 'First Export Sale of Sea Eagle New-Generation Anti-ship Missile', (20 July, 1983).

Brown, N., The Future Global Challenge: A Predictive Study of World Security, 1977-1990, (RUSI/Crane, Russak & Co., New York, 1977), 402pp.

Brown, N., The Future of Air Power, (Croom Helm, London, 1986).

Buzan, B., 'Power, Peace and Security: Contending Relations in International Security', Bulletin of Peace Proposals, Vol 21, No 22, (1984), pp.109-125.

Buzan, B., 'Common Security, Non-Provocative Defence and the Future of Western Europe', Review of International Studies, Vol 13, (1987a), pp.265-279.

Buzan, B., An Introduction to Strategic Studies, (Macmillan/IISS, London, 1987b).

Buzan, B. and G. Rizvi (eds), South Asian Insecurity and the Great Powers, (Macmillan, London, 1986), 257pp.

Builder, C.H., 'The Prospects and Implications of Non-nuclear Means for Strategic Conflict', Adelphi Paper No. 200, (International Institute for Strategic Studies, London, Summer 1985).

Calvocoressi, P., World Politics Since 1945, (Longman's, London, 1977), 458pp.

Chari, P.R., 'The Policy Process', in Roherty, J.M., Defence Policy Formulation: Towards Comparative Analysis, (Carolina Academic Press, North Carolina, 1980).

Chaudhuri, P., The Indian Economy: Poverty and Development, (Crosby Lockwood Staples, London, 1978).

Clark, M., 'The Alternative Defence Debate: Non-Nuclear Defence Policies for Europe', ADIU Occasional Paper No. 3, (Armament and Disarmament Information Unit, Sussex, August 1985).

Chuter, A., 'Indian Navy to purchase anti-ship missile', Jane's Defence Weekly, (21 September 1985), p.601.

Cohen, S. The Indian Army: Its Contribution to the Development of a Nation, (University of California Press, London, 1971).

Common Security: A Programme for Disarmament: The Report of the Independent Commission on Disarmament and Security Issues (The Palmé Report), (Pan Books, London, 1982).

Cronin, R.P., 'Pakistan: US Foreign Assistance Facts', Congressional Research Assistance Issue Brief, (CRS, Library of Congress, Washington D.C., March 1987).

Curnow, R. et al, 'General and Complete Disarmament; A Systems-Analysis Approach' Futures, Vol 8, No 5, (October 1976),.

[D]

Daily Telegraph, 'Harriers Join Indian Navy', (17 December 1983).

Defense & Foreign Affairs Weekly, 'LCA Engines', (27 October-2 November 1986), p.3.

De Briganti, G., 'India Looks to Rafale After LCA Lags', Defense News, (29 August 1988).

Defence Market Report 'India II', (DMS Inc., Cheltenham, England, 1985).

De Riencourt, A., 'India and Pakistan in the Shadow of Afghanistan', Foreign Affairs, Vol 61, No 2, (March 1982).

Defense Week, 'Major Indian Arms Contract Goes To Soviets', Vol 5, No 8, (3 February 1984), p.6.

Defence Industry Review, (Fielding, Newson-Smith & Co., London, 1986).

Deger, S., Military Expenditure in Third World Countries: The Economic Effects, (Routledge and Kegan Paul, London, 1986).

Deitchman, S., Military Power and the Advance of Technology: General Purpose Military Forces for the 1980s and Beyond, (Westview Special Studies in Military Affairs, Boulder, Colorado, 1983).

Deshingkar, G., 'Civilisation Concerns', Seminar, No 256, (1980), pp.4-6.

Deshingkar, G., 'People's security versus national security', Seminar, No. 280, (December 1982), pp.28-30.

Deshingkar, G, 'Can Pakistan Take Us On?', The Illustrated Weekly of India (Bombay), (5 August 1984), p.9.

Dua, H.K., 'Navy may get new aircraft carrier', The Indian Express (Delhi), (7 May 1981).

Dupoy, T.N., The Evolution of Weapons and Warfare, (Hero Books, Fairfax, Va., 1984)

[E]

Economic Intelligence Unit, India, Nepal: Country Profile 1986-87, (The Economist Publications Limited, London, 1986), 72pp.

The Economist, 'Pakistan: Living on the Edge', (17 January 1987).

Elkin, J.F. and W.A. Ritezel, 'The Debate on Restructuring India's Higher Defense Organisation', Asian Survey, Vol XXIV, No 10, (October 1984), pp.1069-1085.

Ember, L.R., 'Worldwide Spread of Chemical Arms Receiving Increased Attention', Chemical and Engineering News, (14 April 1986), pp.8-16.

[F]
Far Eastern Economic Review, 'Intelligence', (17 February 1978), p.5.

Financial Times (London), 'Britain poised to win £1bn. Jaguar order from India', (28 June 1977).

Financial Times (London), 'Indian defence spending', (1 March 1982).

Financial Times (London), 'Royal Ordnance awarded £40m Indian order', (22 January 1987).

Flight International, 'India Considering Jaguar Production', (8 August 1968)

Flight International, 'No Indian Jaguar probe', (5 April 1980), p.1048.

Frank, A.G., 'Arms Economy and Welfare in the Third World', Third World Quarterly, Vol II, No 2, (1980), p.228.

Furdson, Maj-Gen E., 'Huge order by India for Soviet arms', Daily Telegraph, (19 January 1984).

[G]

Gardner, L.C., (et al), Creation of the American Empire: U.S. Diplomatic History, (Rand McNally & Co, London, 1973)

Global Challenge: From Crisis to Co-operation, Breaking the North-South Stalemate: The Report of the Socialist International Committee on Economic Policy (The Manley Report), (Pan, London, 1985), p.196.

Goldblat, J. and V. Milan, 'Militarization and arms control in Latin America', in, World Armaments and Disarmament: SIPRI Yearbook 1982, (SIPRI/Taylor & Francis, London, 1982), pp.393-416.

Goldschmidt, B., 'India's Nuclear Problems', Strategic Digest (IDSA), Vol XII, No 7, (July 1983, p.465.

Goody, J., Technology, Tradition and the State in Africa, (Oxford University Press, 1971).

Graham, M., Determinants of the Arms Race: A Review of the Literature Relating to the Armament Process in the United States since the Second World War, (History & Social Studies of Science, University of Sussex, mimeo, March 1981).

Graham, M., 'The Conference on Disarmament', ADIU Fact sheet No. 2, (ADIU, University of Sussex, Brighton, 4 May 1984), 4pp.

Graham, T.W., 'India', in, Katz, J.E. (ed), Arms Production in Developing Countries, (Lexington, Mass., 1984).

Green, R.H., Neo Liberalism and the Political Economy of War: SSA as a Case Study of a Vacuum, (IDS, University of Sussex, mimeo, December 1988).

The Guardian (London), 'Indians ready to ditch low flying Jaguar', (12 August 1980).

Gupte, P., 'The Hindujas', Forbes, (Novemeber 1987).

Gupta, S., Kashmir: A Study in India-Pakistan Relations, (Asia Publishing House, Bombay, 1966).

Gupta, Sisir., 'The Indian Army: Asking for More', India Today, Vol X, No 2, (31 January 1985), pp.94-99.

Gupta, Shekah., 'The New Thrust', India Today, Vol X, No 21, (15 November 1985).

Gupta, S. and R. Chandran, 'The Spending Spree', India Today, Vol XI, No 7, (15 April 1986).

Gupta, S. and P.G. Thakurta, 'Heading for a Crisis', India Today, Vol XIV, No 4, (28 February 1989), pp.42-50.

[H]

Halpern, M., The Politics of Social Change in the Middle East and North Africa, (Princeton University Press, New Jersey, 1963).

Harrigan, A., 'India's Maritime Posture', Military Review, (April 1969).

The Hindu (International Edition), 'The Stakes in Siachin', (June 22, 1985).

The Hindu (Madras), 'Reviving Cabinet panel on defence urged', (9 April 1986).

Honsa, C., 'India gets USSR arms at bargain-basement prices', Christian Science Monitor, (30 May 1980).

Horn, R.C., Soviet-Indian Relations: Issues and Influence, (Praeger, New York, 1982).

Housego, D., 'Gandhi's moment for steel nerves', Financial Times (London), (27 February 1989.

Housego, D., 'A weaker rule for Mrs Gandhi's son', Financial Times (London), (28 April 1989).

Huntington, S.P., Political Order in Changing Societies, (Yale University Press, New Haven, 1968).

[I]

India Backgrounder (Delhi), 'Armed Forces Modernisation', Vol IV, No 17 (173), (23 July 1979).

India Backgrounder (Delhi),'French Arms Supply to Indian Sub-Continent', Vol IV, No 31 (187), (29 October 1979).

India Today, 'Mazagon Docks: Red Sea', (31 December 1986), p.68.

India Today, 'Gunfire on the Glacier', (31 July, 1985), p.79.

India Today, 'A Sea Change: The Navy has ambitious expansion plans', Vol XII, No 24, (31 December 1987), p.72.

Indian Express (Delhi), 'Govt cancels sale of Centurions', (10 December 1980).

Indian Express (Delhi), 'Insufficient Progress on Main Battle Tank', (29 June 1982).

Indian Express (Delhi), 'PM to probe defence 'degradation'', (3 March 1986).

Indian National Congress, Resolutions on Economic Policy and Programme: 1924-54, (All India Congress Committee, New Delhi, 1954).

International Defense Review, 'Italo-Indian defense agreement', Vol 18, No 8, (August 1985), p.1346.

International Defence Review,'Indian naval construction set for major expansion', No 3, (March 1986), p.369.

International Defense Review, 'India: Indigenous programs flourish amid defense modernisation', Vol 19, No 4, (April 1986), p.437.

International Defense Review, 'India selects turbine for new frigates', Vol 19, No 10, (October 1986), p.1563.

International Defense Review, 'Indian Navy aircraft carrier plans', Vol 20, No 3, (March 1987), p.359.

International Defense Review, 'Marked slow-down in Indian defense spending', Vol 21, No 5, (May 1988), p.478.

International Herald Tribune, 'Indian Purchase Of Jaguar Jet Raises Hot Issue', (11-12 August 1979)

International Institute for Strategic Studies, The Military Balance 1986-1987, (London, 1986).

[J]

Jacobs, G., 'India's Navy and the Soviet Union', Jane's Defence Review, (August 1983).

Jacobs, G., 'India's Army', Asia Defence Journal, no. 9, (September 1985), pp.4-27.

Jain, J.P., Nuclear India, (Radiant Publishers, Delhi, 1974).

Jane's Defence Weekly, 'Italian-Indian Pact', (20 October 1984).

Jane's Defence Weekly, 'Hermes for Scrap if India Says No', (22 June 1985), p.1197.

Jane's Defence Weekly, 'Indian IPV Launch', (20 July 1985).

Jane's Defence Weekly, 'Indian follow-on order for Sea Harriers 'iminent'', (21 September 1985), p.605.

Jane's Defence Weekly, 'Indian Navy to receive Dorniers with Sea Skua', (19 July 1986).

Jane's Defence Weekly 'Indian Navy to replace corvettes', (20 September 1986), Vol 6, p.622.

Jane's Defence Weekly, 'New destroyer for Indian Navy', (20 September 1986), Vol 6, p 618.

Jane's Defence Weekly, 'India receives first 'Kilo' class submarine', Vol 6, (27 September 1986), p.70.

Jane's Defence Weekly, 'LCA programme talks set as USA and India move closer',Vol 6, No 18, (8 November 1986), p 1089.

Jane's Defence Weekly, 'New Navy Base for India', Vol 6, No 19, (15 November 1986), p.1144.

Jane's Defence Weekly, 'First view of INS Ranvir with Ka-28', Vol 6, No 21, (29 November 1986), p.1260.

Jane's Defence Weekly, 'India considers Vickers self-propelled howitzer', Vol 6, No 25, (27 December 1986), p.1472.

Jane's Defence Weekly, 'Indian Submarine Joins Fleet', Vol 7, No 10, (14 March 1987).

Jane's Defence Weekly 'Dassault-Breguet to help design LCA for India', (31 October 1987), Vol 8, No 17, p.676.

Jane's Defence Weekly, 'New Indian Warship Class', Vol 8, No 22 (5 December 1987).

Jane's Defence Weekly, 'Indian SSN departs Vladivostok submarine base', Vol 9, No 3, (23 January 1988), p.116.

Jane's Defence Weekly, 'India's SSGN identified', Vol 9, No 5, (6 February 1988), p.199.

Jane's Defence Weekly, 'India begins Army modernisation', Vol 9, No 9, (5 March 1988), p.390.

Jane's Defence Weekly, 'Dassault to market India's LCA', Vol 10, No 11, (17 September 1988).

Janowitz, M., The Military in the Political Development of New Nations: An Essay in Comparative Analysis, (University of Chicago Press, Chicago, 1964).

Jha, P.S., India: A Political Economy of Stagnation, (Oxford University Press, Bombay, 1980).

Johnson, J.J., The Role of the Military in Underdeveloped Countries, (Princeton University Press, New Jersey, 1962), 426pp.

Jones, R.W, 'India', in, Golblat, J., Non-Proliferation: The Why and Wherefore, (Taylor & Francis, London, 1985).

Journal of Defence and Diplomacy, Vol 3, No 10, (October 1985).

[K]

Kaldor, M., 'The Role of Arms in Capitalist Economies: The Process of Overdevelopment and Underdevelopment', in, Carleton D. and C. Schaerf (eds), Arms Control and Technological Innovation, (Croom Helm, London, 1977), pp.322-341.

Kaldor, M., Towards a Theory of the Arms Trade, (IDS, University of Sussex, Brighton, mimeo, 1977).

Kaldor, M., 'The Military in Third World Development', in, Graham, M., Jolly R. and C. Smith, Disarmament and World Development, (Pergamon, Oxford, 1986).

Kaldor, M. and A. Eide, World Military Order: The Impact of Military Technology on the Third World, (Macmillan, London, 1979), 306pp.

Karnad, B., 'Sub-standard Sub For The Navy', The Hindustan Times (Delhi), (21 November 1981).

Karnad, B., 'LCA venture expensive: US expert', The Hindustan Times (Delhi), (24 February 1986).

Karnad, B., 'Light Combat Aircraft: The Hi-Tech Factor', The Illustrated Weekly of India (Bombay), (8 June 1986).

Kathari, Admiral R.D., A Sailor Remembers, (Vikas, New Delhi, 1982).

Kapur, A., Pakistan's Nuclear Development, (Croom Helm, London, 1987), 258pp.

Kapur, A., 'India's Nuclear Test: Stretching out the options or the first step towards a weapons program?', Center for the Study of Armament and Disarmament Occasional Paper No 4, (Center for the Study of Armament and Disarmament, Los Angeles, undated).

Kaul, B.M. Lt-Gen., The Untold Story, (Allied Publishers, New Delhi, 1967).

Kavic, L., India's Quest for Security: Defence Policies 1947-1965, (University of California Press, Berkely, 1967).

Kennedy, G., The Economics of Defence, (Faber and Faber, London, 1975).

Khera, S.S., India's Defence Problems, (Orient Longman's, New Delhi, 1968).

Kidron, M., Western Capitalism Since the War, (Weidenfeld and Nicholson, London, 1968).

Kitchenman, W. F., Arms Transfers and the Indebtedness of Less Developed Countries, (Rand Corporation N-2020-FF, Santa Monica, Ca., December 1983).

Klare, M.T., War Without End: American Planning for the Next Vietnam, (Alfred A. Knopf, New York, 1972).

[L]

Larus, J., The Indian Navy: The Neglected Service Expands, Modernizes and Faces the Future, (Foreign Policy Perspectives: US and India Seminar, Bangalore, 25-29 June, 1978), 28pp.

Locke, P. and H. Wulf, Consequences of the transfer of technology on the development process, (Paper prepared for the 27th Pugwash symposium on problems of Military Orientated Transfer of Technology in Developed Countries, FELDAFING, 22-26 November 1976).

Locke, P. and H. Wulf, 'The Economic Consequences of the Transfer of Military-oriented Technology', in, Kaldor, M. and A. Eide, World Military Order: The Impact of Military Technology on the Third World, (Macmillan, London, 1979).

Luckham, R., 'Militarisation: The New International Anarchy', Third World Quarterly, Vol 6, No 2, (1985), pp.351-373.

Luckham, R., 'Militarism and International Dependence: A Framework for Analysis', in, Villami, J.J., Transnational Capitalism and

National Development, (Institute of Development Studies, Sussex, 1978), p.179.

Luckham, R., 'Militarism and International Economic Dependence', in, Graham, M., Jolly R. and C. Smith, Disarmament and World Development, (Pergamon, Oxford, 1986).

Luckham, R., The Militarisation of Development: Alternative Frames of Analysis, (IDS, University of Sussex, mimeo, August 1988)

[M]

MacLachlan, A., 'Dassault Wins Indian Order for Mirage Jets', Defense Week, Vol 2, No 25, (26 May 1981), p.1.

Mama, H.P., 'India's Aerospace Industry: Impressive Achievements by a Developing Country'. Interavia, Vol XXXIX, No 2, (February 1984).

Mama, H.P., 'AREN network for Indian Army', International Defense Review, Vol 21, No 3, (March 1988), p.259.

Mama, H.P., 'Indian Tank Developments', International Defense Review, Vol 21, No 5, (May 1988), p.578.

Marshall, P., 'India is Shopping for Arms With List Totaling $4 Billion', Washington Star, (9 July 1979).

Mascarenhas, A., 'India lets Harrier option drop', Sunday Times, (20 July 1980).

Maxwell, N.,

Malhotra, I., 'Hankering After the Harrier: Wrong Approach to Naval Defence', Times of India (Delhi), (6 September 1973).

Malhotra, I., 'Indian finally signs deal for Mirages', The Guardian (London), (13 February 1982).

Malhotra, I., 'Defence Debate Paradox: Confidence and Apathy Coexist', Times of India (Delhi), (7 April 1983).

Menon, K.P.S., The Flying Troika, (Oxford University Press, London, 1963).

Mellor, J.W., 'The Indian Economy: Objectives, Performance and Prospects', in Mellor, J.W. [ed], India: A Rising Middle Power, (Selectbook Service Syndicate, Delhi, 1981).

Monthly Public Opinion Surveys, 'Public opinion on India's nuclear device', Vol 19, No 9, (June 1974), Blue Supplement, pp I-XVI.

Mukherjee, S.J., 'Green Light for Indian LCA', Jane's Defence Weekly, (16 March 1985), p.437.

Mukherjee, S.J., 'India still undecided about aircraft proposals', Jane's Defence Weekly, Vol 4, No 1, (6 July 1985), p.14.

Mukherjee, S.J., 'Further growth for Indian defence companies', Jane's Defence Weekly, Vol 7, No 24, (20 June 1987).

Mullik, B.N., My Years With Nehru: 1948-1964, (Allied Publishers, Bombay, 1972).

Müller, R., 'The Multinational Corporation and the Underdevelopment of the Third World', in, Wilber, C.K., The Political Economy of Development and Underdevelopment, (Random House, New York, 1973).

Munro, R.H., 'Superpower Rising', Time, No 14, (3 April 1989), pp.10-17.

[N]

Nandy, A., 'The Bomb, the NPT and Indian Elites', Economic and Political Weekly, Vol VII, Nos 31-33, Special Number, (August 1972).

Nations, R., 'Pride and Paranoia: A Hindu resurgence inspires the 'Indira Doctrine', Far Eastern Economic Review, No 33, (16 August 1984), pp 23-28.

Navy News & Undersea Technology, 'Indian Navy Buys British Carrier', Vol 3, No 10, (9 May 1986)

Nayar, K., 'How armymen work against us', Suyra, Vol 11, No 23, (8-11 January 1984), p 7.

Nehru, J., India and the World, (Allen and Unwin, London 1936).

Neuman, S., 'Offsets in the International Arms Market', World Military Expenditures and Arms Transfers, (US Arms Control and Disarmament Agency, Washington D.C., 1985), pp.35-40.

Nigudker, A., 'The Arjuna MBT', Defense & Armament Héraclès International, No 67, (November 1987), p.82.

[P]

Palma, G., 'Dependency: A Formal Theory of Underdevelopment or a Methodology for the Analysis of Concrete Situations of Underdevelopment?', in, Streeten, P. and R. Jolly, Recent Issues in World Development: A Collection of Survey Articles, (Pergamon Press, Oxford, 1981),

Pacific Defence Reporter 1985 Annual Reference Addition, (December 1984/January 1985).

Palit, D.K., Maj-Gen (Ret'd), 'Mirage Deal Needs Careful Thought', Times of India, (30 October 1981).

Pye, L.W., 'Armies in the Process of Political Modernization', Ibid., in, Johnson, J.J., The Role of the Military in Underdeveloped Countries, (Princeton University Press, New Jersey, 1962).

[R]

Ram, A., 'A Few Thoughts on Applied Science in India', CGCRI Bulletin, Vol.13, No.4, (1966), pp.1-8.

Ram, M., 'India goes shopping', Far Eastern Economic Review, (16 October 1981), p.27.

Ram, M., 'Planes and boats and guns - the bill is growing', Far Eastern Economic Review, (31 May 1984), pp 26-27.

Rao, P.V.R., Defence Without Drift, (Popular Prakashan, Bombay, 1970).

Raphael, A., 'Thatcher Used Aid to Sell Arms', Sunday Times (London), (7 May 1989).

Rashid, A., 'Apocalypse now for Pakistan's melting pot', The Independent (London), (30 January 1987).

Reiss, M., 'Beyond the 1985 NPT Review Conference: Learning to Live With Uncertainty', Survival, Vol. XXVII, No. 5, (September/October 1985), pp.226-234.

Rasor, D., (ed), More Bucks, Less Bang: How the Pentagon Buys Ineffective Weapons, (Fund for Constitutional Government/Project on Military Procurement, Washington D.C., 1983), 341pp.

Rikhye, R., 'India Unhappy Over Soviet Arms', Armed Forces Journal International, (March 1975), p 14.

Rikhye, R., The Indo-Pakistan Ground Balance: A Preliminary Analysis, (Centre for the Sudy of Developing Societies, Delhi, mimeo, 1984), p.124.

Robertson, B.A., 'South Asia and the Gulf Complex', in, Buzan and Rizvi [1986].

Roxborough, I., Theories of Underdevelopment, (Macmillan, London, 1979).

Rudolph, L.I. and S.H. Rudolph, In Pursuit of Lakshmi: The Political Economy of the Indian State, (University of Chicago Press, Chicago, 1987)

[S]

Saigal, Lt.Col., J.R., The Unfought War of 1962: The NEFA Debacle, (Allied Publishers, New Delhi, 1979), 180pp.

Salvy, R., 'Light combat aircraft projects proliferate', International Defense Review, Vol 20, No 12, (December 1987).

Sandhu, B., Unresolved Conflict: India and China, (Sangam Books, London, 1988).

Sapru, S., 'HAL units remain idle for want of work', Indian Express, (28 June 1982).

Sardesai, D.R., 'India and Southeast Asia', in, Nanda, B.R., Indian Foreign Policy: The Nehru Years, (Vikas, Delhi, 1976).

Sen Gupta, B., Nuclear Weapons: Policy Options for India, (Centre for Policy Research/Sage Publications, New Delhi, 1983).

Sharma, K.K., 'Modernising the Military: Indian Defence Requirements', Financial Times (London), (12 April 1979).

Sharma, K.K., 'Jaguar deal 'pay-off' claim', Financial Times (London), (17 August 1979).

Sharma, K.K., 'Gandhi confirms Jaguar deal', Financial Times, (14 March 1980).

Sharma, K.K., 'Gandhi hints at heavier Indian defence spending', Financial Times, (11 August 1981).

Sharma, K.K., 'Moscow offers to upgrade Indian MiGs', Financial Times (London), (20 December 1988).

Singh, P., 'India's Defence Perspectives and the Armed Forces', Asian Defence Review, (October 1982), pp.12-30.

Singh, R., 'Light Combat Aircraft: Trouble Before Take-off', India Today, Vol XI, No 2, (31 January 1986), p.79.

SIPRI: World Armaments and Disarmament 1969-70, (Almqvist and Wiksell, Stockholm, 1970)

SIPRI, Arms Trade With The Third World, (Humanities Press, New York, 1971).

SIPRI, Arms Trade Registers: The Arms Trade with the Third World, (Almqvist and Wiksell, Stockholm, 1975a).

SIPRI, 'The Indian Nuclear Explosion', SIPRI Yearbook 1975: World Armaments and Disarmament: , (MIT Press, London, 1975b),

Sivard, R.L., World Military and Social Expenditures: 1986, (World Priorities, Washington, D.C., 1986).

Sivard, R.L., World Military and Social Expenditures: 1987-8, (World Priorities, Washington, D.C., 1987).

Smith, C., 'The Pokharan Test Ten Years After', ADIU Report, Vol 6, No 3, (May-June 1984), pp.6-9.

Smith, C., 'A Policy of Ambiguity? Nuclear Proliferation in South Asia', ADIU Report, Vol 9, No 4, (July-August 1987), pp.1-4.

Smith, C. and B. George MP, 'The defence of India', Jane's Defence Weekly, Vol 3, No 9, (2 March 1985), pp.365-370.

Smith D. and R. Smith, The Economics of Militarism, (Pluto Press, London, 1983).

Smith, S, 'The Development of International Relations as a Social Science', Millenium: Journal of International Studies, Vol 16, No 2, (Summer 1987),

Spinney, F.C., Defense Facts of life: The Plans/Reality Mismatch, (Westview Press, London, 1985).

Stanley and Pearton

Statement on the Defence Estimates 1986: Cmnd. 9763-I, (HMSO, London, 1986).

The Statesman (Delhi), '$340M. Worth of US Arms For India', (14 October 1980).

The Statesman, 'India Buys Dutch Radar System', (1 January 1986).

Stuadenmaier, W.O., 'Iran-Iraq (1980-)', in, Harkavy, R.E. and S.G. Neuman, The Lessons of Recent Wars in the Third World: Approaches and Case Studies, Volume 1, (Gower/Lexington, Aldershot, 1985).

Subramanyam, K., 'Nehru and the India-China conflict of 1962', in, Nanda, B.R. [1976].

Subramanyam, K., Indian Security Perspectives, (ABC Publishers, Delhi, 1982), 248pp.

Sundar Rajan K.R., 'Who Runs India', Gentleman, (January 1984).

Sunday Times (London), 'War plane order lost', (22 June 1980).

[T]

Taibo, X.I., 'Talks on Spanish-Indian ventures', Jane's Defence Weekly, (9 March 1985).

Tandon, B., 'Kremlin in Chase for Navy Deals', Daily Telegraph, (5 March 1984).

Tellis, A., 'Aircraft Carriers and the Indian Navy: Assessing the Present, Discerning the Future', Journal of Strategic Studies, Vol 10, No 2, (June 1987a), pp 141-167.

Tellis, A., 'India's Naval Expansion: Reflections on History and Strategy', Comparative Strategy, Vol 6, No 2, (1987b).

Terhal, P., 'Foreign Exchange Costs of the Indian Military 1950-1972', Journal of Peace Research, Vol XIX, No 3, (1982a).

Terhal, P., 'Preliminary Estimate of Foreign Exchange Use of the Indian Military, 1950-1972', Discussion Paper No 63, (Centre for Development Planning, Erasmus University, Rotterdam, December 1982b), 51pp..

Thakurta, P.J., 'Up, Up and Away: Pros and Cons of a fresh IMF loan are debated', India Today, Vol XIV, No 8, (15 May 1989), pp.68-69.

The Times (London), 'Conflict in India over naval policy', (13 May 1969).

The Times (London), 'Soviet arms leave gap for India', (3 July 1970).

Times of India (Delhi), 'Big Role for the Navy envisaged', (9 August 1981).

Times of India (Delhi), 'Air defence regiments to be modernised', (13 August 1981).

Toye, J., Dilemmas of Development: Reflections on the Counter Revolution in Development Theory and Policy, (Basil Blackwell, Oxford, 1987), 177pp.

Thomas, R., India's Emergence as an Industrial Power - Middle Eastern Contracts, (C. Hurst and Co., London, 1982)

Thomas, R.G.C., Indian Security Policy, (Priceton University Press, Princeton, New Jersey, 1986), 310pp.

Thomas, R.G.C., The Defence of India: A Budgetary Perspective of Strategy and Politics, (Macmillan, Delhi, 1978), 245pp.

[U]

Ullman, H.K., 'Profound or Perfunctory: Observations on the South Atlantic Conflict', in, Harkavy, R.E. and S.G. Neuman, The Lessons of Recent Wars in the Third World: Approaches and Case Studies, Volume 1, (Gower/Lexington, Aldershot, 1985).

United Nations, Economic and Social Consequences of the Arms Race and of Military Expenditures, (United Nations, New York, 1962).

United Nations, Economic and Social Consequences of the Arms Race and of Military Expenditures, (A/8469/Rev. 1, United Nations, New York, 1972).

United Nations, 'The Relationship between Disarmament and Development', Disarmament Study Series 5, (United Nations, New York, 1982), pp.136-138.

United Nations, 'The Reduction of Military Budgets', Disarmament Study Series 10, (United Nations, New York, 1983).

US Naval Institute Proceedings, 'India as a Prospective Partner', Vol 90, No 9, (September 1964).

US Naval Institute Proceedings, 'India's Naval Role Takes Shape', Vol 94, No 9, (August 1968).

[V]

Valluri, S.R., 'Indian Aeronautic Scene: Light Combat Aircraft', Mainstream, Vol 24, No 27, (8 March 1986).

Velupellai, D., 'Hindustan Aeronautics: India's Aerospace Giant', Flight, (8 November 1980), p.1179.

Venkateswaran, A.L., Defence Organisation in India: A Study of Major Developments in Organisation and Administration Since Independence, (Ministry of Information and Broadcasting Publications Division, Government of India, Delhi, January, 1969) 385pp.

Venkateswaran, A.L., 'Why a defence ministry?', The Indian Express, (25 May 1984).

Vertzberger, Y., 'Bureaucratic-organizational Politics and Information Processing in a Developing State', International Studies Quarterly, Vol 28, No 1, (March 1984).

Vishvanathan, S., Organizing for Science: The Making of an Industrial Research Laboratory, (Oxford University Press, Delhi, 1985).

Vlahos, M., 'Designing a Third World Navy', Journal of Defense and Diplomacy, Vol 3, No 3, (March 1985), pp 39-42, 62.

[W]

Washington Times, 'India decides to rely more on Russians as source of its weapons', (5 July 1984)

Weiner, M., 'Assessing the Political Impact of Foreign Assistance', in Mellor, J.W. [1981].

Weissman, S. and H. Crossley, The Islamic Bomb, (Times Books, New York, 1981).

Who's Who in the World 1982-83, (Marquis Who's Who Inc., Chicago, 1982)

Wigg, R., 'Mrs Gandhi defends her policy on Afghanistan', The Times, (3 April 1980)

Wood, D., 'Proposals sought for Indian light fighter', Jane's Defence Weekly, Vol 1, No 1, (14 January 1984), p 13.

Worldwatch Institute, State of the World, (Norton, New York, 1986).

Wulf, H., 'India: the unfulfilled quest for self-sufficiency', in, Brzoska, M. and T. Ohlson, (eds), Arms Production in the Third World, (Taylor & Francis, London, 1986).

[X]

'X' (George Kennan), 'The Sources of Soviet Conflict', Foreign Affairs Quarterly, (July 1947).

[Z]
Zuckerman, S., Nuclear Illusions and Reality, (Collins, London, 1982).

Primary Sources

Blackett, P.M.S., Scientific Problem of Defence in Relation to the Indian Armed Forces: A Report to the Hon'ble the Defence Minister, (New Delhi, 10 September 1948), p.1.

'Revolution in Tibet and Nehru's Philosophy' (editorial), Jen-Min Jih-pao, (Peking), (6 May 1959), p.12.

Statistics of the Military Effort of the British Empire During the Great War, (War Office, London, 1922).

The Military Balance 1979-80, (Institute of Strategic Studies, London, 1980)

Rubin, B.R., Private Power and Public Investment in India: A Study in the Political Economy of Development, (Unpublished PhD dissertation, University of Chicago, 1982).

Ministry of External Affairs Report 1980-81, (Ministry of External Affairs, Government of India, New Delhi, 1981), pp iv-v.

Warsaw Pact Economic Aid Programs in Non-Communist LDCs: Holding Their Own in 1986, (United States Department of State, Washington DC, August 1988)

The Soviet Union in the Third World, 1980-85: An Imperial Burden or Political Asset?, (Report Prepared for the Committee on Foreign Affairs, US House of Representatives, Congressional Research Service, 23 September 1985).

'Magazon Dock Ltd. - Shipbuilding', Seventy-Fourth Report of the Committee on Public Undertakings (Ministry of Defence - Department of Defence Production), (Seventh Lok Sabha, Lok Sabha Secretariate, New Delhi, 1983), p 18.

'Development of a Helicopter', Seventy-Sixth Report: Public Accounts Committee (Ministry of Defence), (Seventh Lok Sadha, Lok Sabha Secretariat, New Delhi, 26 March 1982a), p 18.

'Replacement of a Basic Trainer Aircraft', Eighty-Seventh Report of the Public Accounts Committee (Ministry of Defence), (Seventh Lok Sabha, Lok Sabha Secretariat, New Delhi, 16 April 1982b), 48pp.